

RETAINED EXPERTS:

1. Dr. Aaron Filler, M.D., PhD, FRCS: Neurography Institute, 2716 Ocean Park Blvd., Suite 1007B, Santa Monica, California, 90405. Phone (310) 314-6410. Neuroimaging, Neuroradiographic, Diffusion Tensor Imaging Report (CD of scans previously provided to Defendants), Curriculum Vitae and List of Publications and Testimonies, and Fee Schedule/Statement of Compensation, attached as **Exhibit A**.
2. Dr. Huma Haider, M.D.: National Brain Injury Institute, 6065 Hillcroft Street, Suite 202, Houston, TX 77081. Phone (866) 983-3167; info@nationalbii.com. jguerra@nationalbii.com. Neurological Assessment Battery and Diffusion Tensor Imaging Report, Life Care Plan, Curriculum Vitae and Publications, Fee Schedule, and List of Published Testimonies, attached as **Exhibit B**.
3. Enrique Vega, MS, CRC, CDMS: Vocational Economics, Inc., 20700 Ventura Boulevard, Suite 220, Woodland Hills, California 91364. Phone (818) 346-3300; Fax (559) 439-0918. enriquev@vocecon.com, jackiey@vocecon.com; Vocational Economic Assessment Report and Medical Care Cost Summary Report/Economist Valuation for JoAnn Wright Haysbert, Curriculum Vitae, Fee Schedule/Statement of Compensation, and List of Published Testimonies, attached as **Exhibit C**.

TREATING PHYSICIANS / NON-RETAINED EXPERTS:

1. Dr. Lind Chinniry, MD.: Divine Health Care LLC., 2100 Executive Drive, Suite B, Hampton, Virginia, 23666, Phone (757) 826-1600; Dr. Chinnery will be able to testify within the scope of the treatment he rendered to Plaintiff,

based on what he learned during actual treatment of Plaintiff, and he will offer opinions formed during the care and treatment of Plaintiff's injuries.

2. Dr. Huma Haider, M.D.: National Brain Injury Institute, 6065 Hillcroft Street, Suite 202, Houston, TX 77081. Phone (866) 983-3167; info@nationalbii.com. jguerra@nationalbii.com; Dr. Haider will be able to testify within the scope of the treatment she rendered to Plaintiff, based on what she learned during actual treatment of Plaintiff, including that Plaintiff suffered neurocognitive deficits, and she will offer opinions formed during the care and treatment of Plaintiff's injuries.
3. Dr. Amir Vokshoor, M.D., F.A.A.N.S.: The Spine Institute, 2811 Wilshire Blvd., Suite 850, Santa Monica, California 90402; Phone (310) 574-0400; Fax: (310) 574-0485; Dr. Vokshoor will be able to testify within the scope of the treatment he rendered to Plaintiff, based on what he learned during actual treatment of Plaintiff, and he will offer opinions formed during the care and treatment of Plaintiff's injuries.
4. Dr. Wilson P. Daughtery, M.D., Ph.D.: Sentara Neurosurgery Specialists, 301 Riverview Ave., Suite 202, Norfolk, VA 23510; Phone (844) 615-1237; Dr. Daughtery will be able to testify within the scope of the treatment he rendered to Plaintiff, based on what he learned during actual treatment of Plaintiff, and he will offer opinions formed during the care and treatment of Plaintiff's injuries.
5. Dr. Katherine Rachon, O.D.: Virginia Eye Consultants, 2234 Cunningham Drive, Hampton, VA 23666, Phone (757) 742-3902; Dr. Rachon will be able to testify within the scope of the treatment she rendered to Plaintiff, based on

what she learned during actual treatment of Plaintiff, and she will offer opinions formed during the care and treatment of Plaintiff's injuries.

OBJECTION TO DISCLOSURE:

Plaintiff objects to the disclosure of medical expert witnesses at this time and intends to file a Motion for Reconsideration of the Magistrate Judge's ruling on Plaintiff's Motion for an Order Extending Expert Discovery Deadlines. (*See* Dkt. Nos. 92, 93, 126). Should the District Court ultimately grant Plaintiff's pending Motion for Reconsideration, this document shall be immediately withdrawn.

Additionally, the timing to select and retain key medical experts is still premature as not all necessary witnesses have been deposed or medical records obtained. Therefore, not all experts have been identified therein or formally retained by Plaintiff at this time. Accordingly, Plaintiff expressly reserves the right to supplement the disclosure of medical expert witnesses once pending discovery issues and filings have been resolved and she is able to finalize these medical expert witnesses.

RESERVATION OF RIGHT TO SUPPLEMENT:

Should new information become known to Plaintiff after this date which shall necessitate supplementing these disclosures, Plaintiff hereby expressly reserves the right to file and serve said supplement(s) consistent with Rules 26(a)(2)(E) and 26(e) of the Federal Rules of Civil Procedure. The absence of any information herein shall

not prohibit Plaintiff from filing said supplements at a later date and shall not foreclose Plaintiff from offering that information in the form of evidence at trial, so long as Plaintiff properly supplements as allowed under the Federal Rules of Civil Procedure.

DATED: June 23, 2021

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CERTIFICATE OF SERVICE

JOANN WRIGHT HAYSBERT v. BLOOMIN' BRANDS, INC., et al., Case No.:
4:20-cv-00121-RBS-DEM

I hereby certify that on this 23rd day of June, 2021, a true and accurate copy of the foregoing was sent via email:

I served this document on the persons below:

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EXHIBIT A

DIFFUSION TENSOR IMAGING

Patient Name: Haysbert, JoAnn

Date of Birth: 09/22/1948

MR#: HJ50647

Date of Injury: 05/23/2018

Date of Study: 09/18/2020

Requesting Physician: Huma Haider, MD

Site Name and Equipment: Medical Imaging of Southern California, Beverly Hills, CA, 3T, Siemens MRI Scanner

INDICATION: This is a 71-year-old woman who on 05/23/2018 was at a restaurant and when she got up from the table, she slipped and fell on what was described as a slippery floor, impacting her head, with some loss of consciousness and the onset of neurologic symptoms, a number of which have persisted.

STUDY: MRI OF THE BRAIN WITH DIFFUSION TENSOR IMAGING

METHODS: These images demonstrate the detailed anatomy of the brain with supplemental analysis through evaluation of fractional anisotropy and diffusion tensor imaging tractography.

The report is provided in three segments:

- 1) Tractography from diffusion tensor imaging (DTI)
- 2) Fractional Anisotropy analysis from diffusion tensor imaging (DTI)
- 3) General brain imaging with Susceptibility Weighted Imaging (SWI).

Diffusion tensor imaging (DTI) was obtained in a 3-Tesla Siemens imager using thirty directions of diffusion. The fractional anisotropy and tractographic analysis were processed using FDA approved NORDIC Brain Ex clinical workstation software.

DTI TRACTOGRAPHY REPORT AND ANALYSIS:

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TRACTOGRAPHY C REPORT:

TECHNICAL: These images were obtained with 30 directions of diffusion gradients on a **Siemens 3-Tesla imager**, there are no significant artifacts impairing image interpretation.

The tractographic analysis is carried out by adjusting the fractional anisotropy threshold as well as the degrees of angulation and tractographic segment length as inputs to the FACT tractographic algorithm for tract analysis in order to identify areas of tractographic deficits and continuities.

Loss of tractographic continuity does not demonstrate a complete loss of connections; rather it is the effect of a decrease of coherently directed fractional anisotropy along the course of a tract. Such a drop off halts the progress of the tractographic reconstruction process so that the remainder of the tract does not appear. These have clinical significance because they represent clinically relevant interference with transmission of neurological information from one part of the brain to another. The presence of such drop off point does not represent complete loss or obstruction, but rather detects the presence of a relative drop off that affects the normal function of a major tract.

FINDINGS: The tractographic analysis reveals losses bilaterally in the frontal lobe with expected effects of impairment of multistep planning, map-based planning and emotional control release functions. There are losses additionally appreciated bilaterally in the supra-callosal cingulum which would have the expected effects of increased anxiety and depression. Losses are appreciated in the left parietal lobe in the area of the angular gyrus and in this right-handed individual this would be expected to have the effects of impairment of word finding and some effects on calculation ability. Losses are seen bilaterally in the arcuate fasciculus. The right side arcuate fasciculus losses can affect the prosody or flow of speech and the left arcuate fasciculus losses can affect a variety of more complex speech functions. Note is additionally made of some losses in the mid-portion of the corpus callosum which can suggest some degree of diffuse axonal injury with general cognitive impairment. There are losses appreciated in the pillars of the fornix on the left side and the crus of the fornix on the right side which can have effects on impairing new memory formation. The right parietal lobe is generally normal in appearance. The temporal lobes are generally normal in appearance, right and left. The right and left occipital lobes are

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generally normal in appearance. No abnormalities are appreciated in the area of the middle cerebellar peduncle, right or left side.

Three dimensional 360 degree rotations are provided in the DICOM data set for visualization of these findings.

TRACTOGRAPHY IMPRESSION: Bilateral losses in the frontal lobes affecting particularly the area of the superior, middle and inferior frontal gyri with expected effects on multistep planning, map-based planning and emotional control release functions. There are losses on the left side in the parietal lobe extending into the area of the angular gyrus with expected effects of impairment of word finding and calculation ability. Losses are appreciated bilaterally in the arcuate fasciculus which would be expected to have effects on conversation such as impairment of prosody or flow of speech as to the right side and more complex variety of conversational speech impairments associated with the left side abnormality. There are losses in the area of the mid-portion of the corpus callosum which is indicative of diffuse axonal injury that may affect cognition more generally. There are losses bilaterally in the supra-callosal cingulum with expected effects of increased anxiety and depression. Losses appreciated in the right crus of the fornix and the left pillar of the fornix on detailed formal tractographic evaluation of the fornix and the limbic system reveal abnormalities which will have the expected effects of impairment of new memory formation. Overall, these findings demonstrate multiple abnormalities with expected effects on cognition, emotional behavior and neurologic functions as identified above. The degree of injury appreciated in the images would be expected to result in clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

FRACTIONAL ANISOTROPY (FA) REPORT AND ANALYSIS:

These images demonstrate the analytical level information concerning brain structure. The fractional anisotropy measurements are objective assessments of brain regions either obtained for standardization measurements or comparing right and left structures. Data is obtained with 30 directions of diffusion in a 3Tesla **Siemens scanner**.

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VOLUMES OF INTEREST (VOI's): In all cases the volumes of interest (VOI's) that were measured are selected areas, entirely in white matter, of the highest intensity for fractional anisotropy as visualized by a fractional anisotropy overlay method. This method results in measurements of highest levels of fractional anisotropy in an anatomically recognizable brain white matter structure in the regions assessed. Data is provided with the size in cubic millimeters of the VOI, as well as the mean, minimum and maximum of FA values in the VOI with standard deviation calculated. Histograms are provided for each VOI that can reveal any unwanted bimodal distribution. Image captures were obtained demonstrating the location and size of each VOI measured as shown in three imaging planes. Further, the histograms provided show the variability of anisotropy among the voxels measured within each VOI. Significant right/left asymmetries in fractional anisotropy are considered clinically relevant on a prima facie basis. For a given level of anisotropy, a smaller size of a VOI – that is otherwise bilaterally symmetric – will reveal a reduced volume of that tract and this size difference also has clinical significance in many situations.

CLINICAL BASIS (Scientific Model): This fractional anisotropy analysis is carried out according to the method and clinical concept of Brander et al: *Diffusion Tensor Imaging of the Brain in a Healthy Adult Population: Normative Values and Measurement Reproducibility at 3 T and 1.5 T*; Acta Radiologica (2010), Volume 7 pages 800-807, in which VOI's are measured for fractional anisotropy using the Splenium of the Corpus Callosum as a baseline measure to be compared with other individuals as well as an internal references to assess relative FA drop off in other brain regions. The data provided in articles such as the Brander study show expected relative fractional anisotropy measures using the Splenium of the Corpus Callosum as the standard, because this will tend to have the highest fractional anisotropy in the brain and can therefore provide a cross reference to other imaging subjects as well as provide a basis for assessing the degree of drop-off present to any given brain region associated in a relative to a comparative, standardized set of findings from large numbers of normal individuals.

There are more than 15,000 high quality peer reviewed publications showing the utility and clinical relevance of DTI and only one or two publications written by professional defense experts that attempt to formally raise concerns about utility (e.g. *Wintermark, et*

al (2015), Imaging Evidence and Recommendations for Traumatic Brain Injury: Advanced Neuro- and Neurovascular Imaging Techniques AJNR 36:E1-E11) mostly by pointing out that the vast majority of publications use groups of patients (usually required for all published studies) but that legal cases focus on individuals. However, Wintermark provided an unreliable biased assessment because he improperly omitted excellent studies showing high clinical and legal utility of DTI data for individuals such as *Yuh et al (2014): Diffusion Tensor Imaging for Outcome Prediction in Mild Traumatic Brain*

Injury: A TRACK-TBI Study, Journal of Neurotrauma 31:1457-1477; and *Mustafi et al: Acute White-Matter Abnormalities in Sports-Related Concussion: A Diffusion Tensor Imaging Study from the NCAA-DoD CARE Consortium*. Journal of Neurotrauma, ePub 2017.

CLINICAL BASIS (Report Methodology): By viewing an FA overlay on a high resolution, co-registered MP-RAGE three dimensional brain MRI acquisitions, asymmetries and drop-offs can be identified as to identified anatomical brain structures. For these VOI locations, the mean and standard deviation data can be used to assess the statistical significance of any different in overall FA for a VOI compared with either the FA of the Splenium or with the FA of a similar VOI on the opposite side. Only a single combined FA for right and left Fornix is obtained in some cases because of its small size if it is not possible to obtain usable measures for each side.

SCIENTIFIC BASIS: Fractional anisotropy is expressed as fraction between 0 and 1 and reflects the degree to which fibers within a given voxels or group of voxels measured and assessed in the volume of interest, tend to share a coherent single direction and high health with good quality within the measured volume. A loss of fractional anisotropy is correlated with a decrease of function or transmission to a given white matter tract area. When two different tracts pass through each other having different directions, incorrectly low FA levels can be obtained, but this is controlled for here by selecting well recognized white matter brain structures that have a coherent single direction. Additionally, matching the same structure right to left corrects for this

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directional diversity issue. As for comparisons with the Splenium FA values, the data from the Brander et al article provides a useful well documented clinical framework that corrects for the directional diversity issue.

RESULTS (STANDARDIZATION): The splenium of the corpus callosum has a fractional anisotropy of 0.78, which is well within normal range, and this is used as a baseline for comparison with other individuals and for comparison with other structures for this individual's brain.

RESULTS (FINDINGS): The splenium is commented on above. The genu of the corpus callosum is at 0.81, also within the normal range. The right corona radiata, measured at the genu of the internal capsule is at 0.68, within the normal range, and left corona radiata measured at the level of the internal capsule is at 0.76, also within the normal range. The right to left difference is not statistically significant. On the right side at the stem of the white matter for the superior, middle and inferior frontal gyri, the fractional anisotropy is 0.22, which is quite low. The left side measures at 0.32. The right to left difference is not quite statistically significant. The overall level is quite low however and suggestive of problems which will result in impairment of multistep planning, map-based planning and emotional control release functions. The right parietal lobe measures at 0.46, just within the normal range. The left parietal lobe is at 0.34. The right to left difference is statistically significant and is essentially in the area of the angular gyrus, which in this right-handed individual would be expected to have effects of impairment of word finding and calculation ability. The right occipital lobe is at 0.52. The left occipital lobe measures at 0.36, which is low. The right to left difference here is statistically significant. This might be expected to result in some impairment of processing of visual information arising on the right side of the body. The right temporal lobe is at 0.48 and within normal range. The left temporal lobe is at 0.41, just within the normal range for someone of this age, despite the relatively good numbers for the splenium of the corpus callosum. The right uncinate fasciculus measures at 0.54 and the left uncinate fasciculus measures at 0.33. The right to left difference is not statistically significant because of variability of the left side. The right arcuate fasciculus is at 0.28 and the left arcuate fasciculus is at 0.28. These are both low numbers and would be consistent with problems with conversational speech affecting primarily prosody or flow of speech as to the right side and more general conversational speech functions as to the left side in this right-handed individual. The right hippocampal cingulum is at 0.32, and that is moderately low. The left hippocampal cingulum is at 0.29, which is also moderately low. The right to left difference is not statistically significant. Overall, these are moderately low numbers and may reflect problems with attention. The right fimbria of the fornix and stria terminalis is at 0.60, within the normal range. The left fimbria of the fornix and stria terminalis is at 0.49, within the normal range. The anterior fornix in the area of the pillars is at 0.37. The posterior fornix at the level of the crus is at 0.24. Particularly for the posterior

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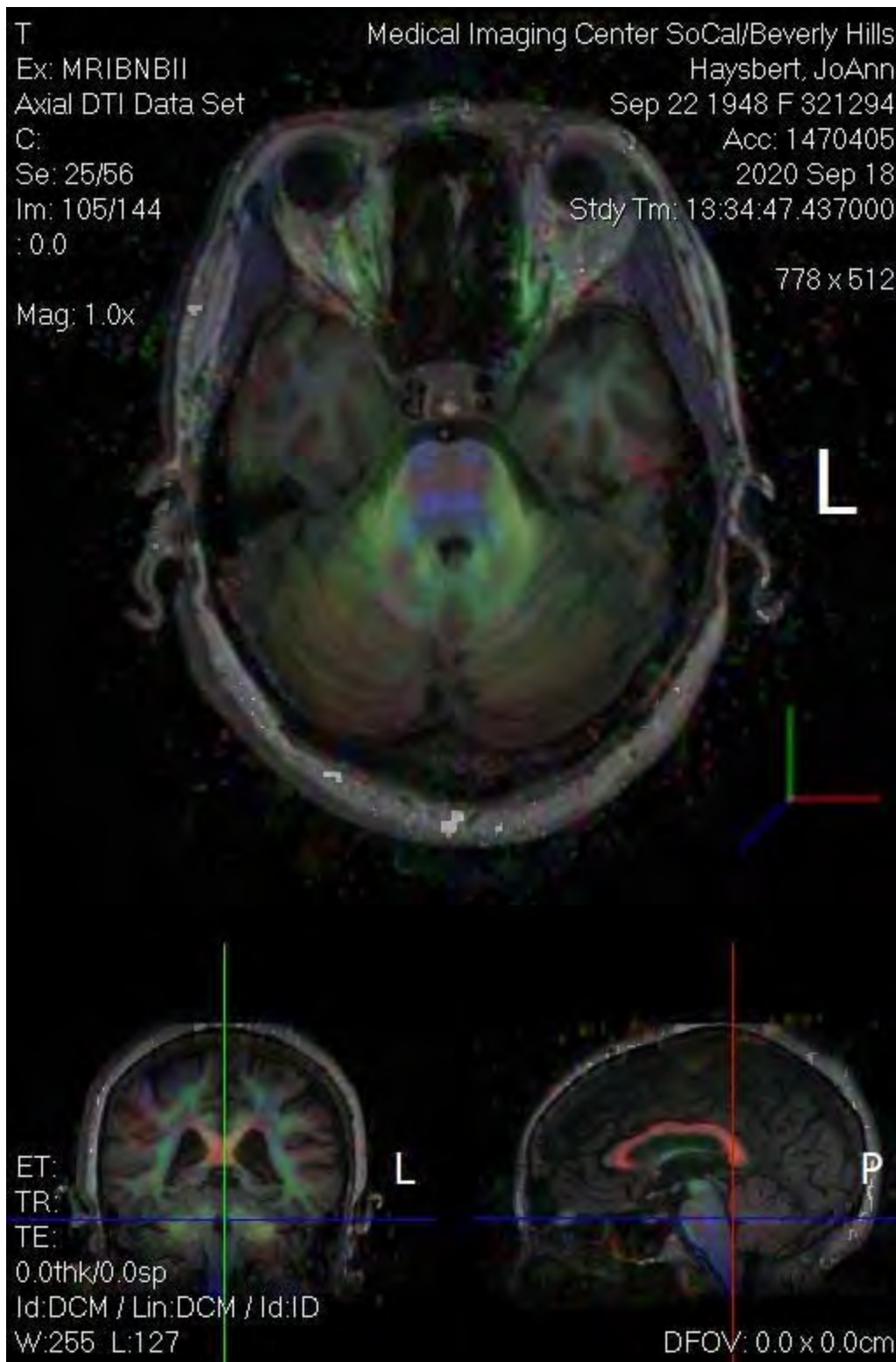
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fornix this is a low number and the anterior to posterior difference is statistically significant and this would be expected to have effects of impairment of new memory formation. The right middle cerebellar peduncle measures at 0.60 and the left middle cerebellar peduncle is at 0.77. This is a low number for the right middle cerebellar peduncle and the right to left difference is statistically significant. Impairment for the right middle cerebellar peduncle would be expected to have the effects of some vertigo, problems with balance, sometimes some auditory processing and smooth pursuit motions problems. The right medial lemniscus is at 0.52. The left medial lemniscus is at 0.42. The right to left difference is not statistically significant. Overall, these are moderately low numbers. The medial lemniscus is a general sensory tract and may reflect impairment in the mid-brain area because of this location of abnormality. These would impact functions such as eye movement, convergence, and the underlying symptoms such as photophobia.

FRACTIONAL ANISOTROPY IMPRESSION: Low numbers for the frontal lobe bilaterally, at the stem of the white matter base for the superior, middle and inferior frontal gyri with expected effects of impairment as to multistep planning, map-based planning and emotional control release functions. Low number for the left parietal lobe in the area of the angular gyrus with expected effects on this right-handed individual for problems with word finding and calculation ability. Losses in the left occipital lobe which impair processing of visual information arising on the right side of the body. Low numbers for the uncinate fasciculus and inferior frontal occipital fasciculus may reflect impairments such as flattening of affect and loss of emotional drive and impairment of some visual recognition phenomena. However, given the variability, it is not clearly statistically significant as to the contralateral side. The arcuate fasciculus bilaterally with low numbers which will affect aspects of conversational speech. Low numbers for the hippocampal cingulum which will have expected effects on attention. Low numbers for the posterior fornix with expected problems with new memory formation. Low number for the right middle cerebellar peduncle with expected effects such as vertigo, balance problems, impairment of smooth pursuit motions and some types of auditory processing. A somewhat low number for the left medial lemniscus which would expect to be associated with some midbrain function impairment such as problems with eye movement, pupillary accommodation, convergence and may be associated with symptoms such as photophobia. Overall, these findings demonstrate multiple appearance with effects on cognition, emotional behavior and neurologic functions. The degree of abnormality appreciated in the images would be consistent with clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

FA Measurements and Statistical Calculations:

These images demonstrate data collection and analysis in addition to the measured VOI's for the medial lemniscus and the full data set. A full set of VOI measures appears in the image DICOM data file.



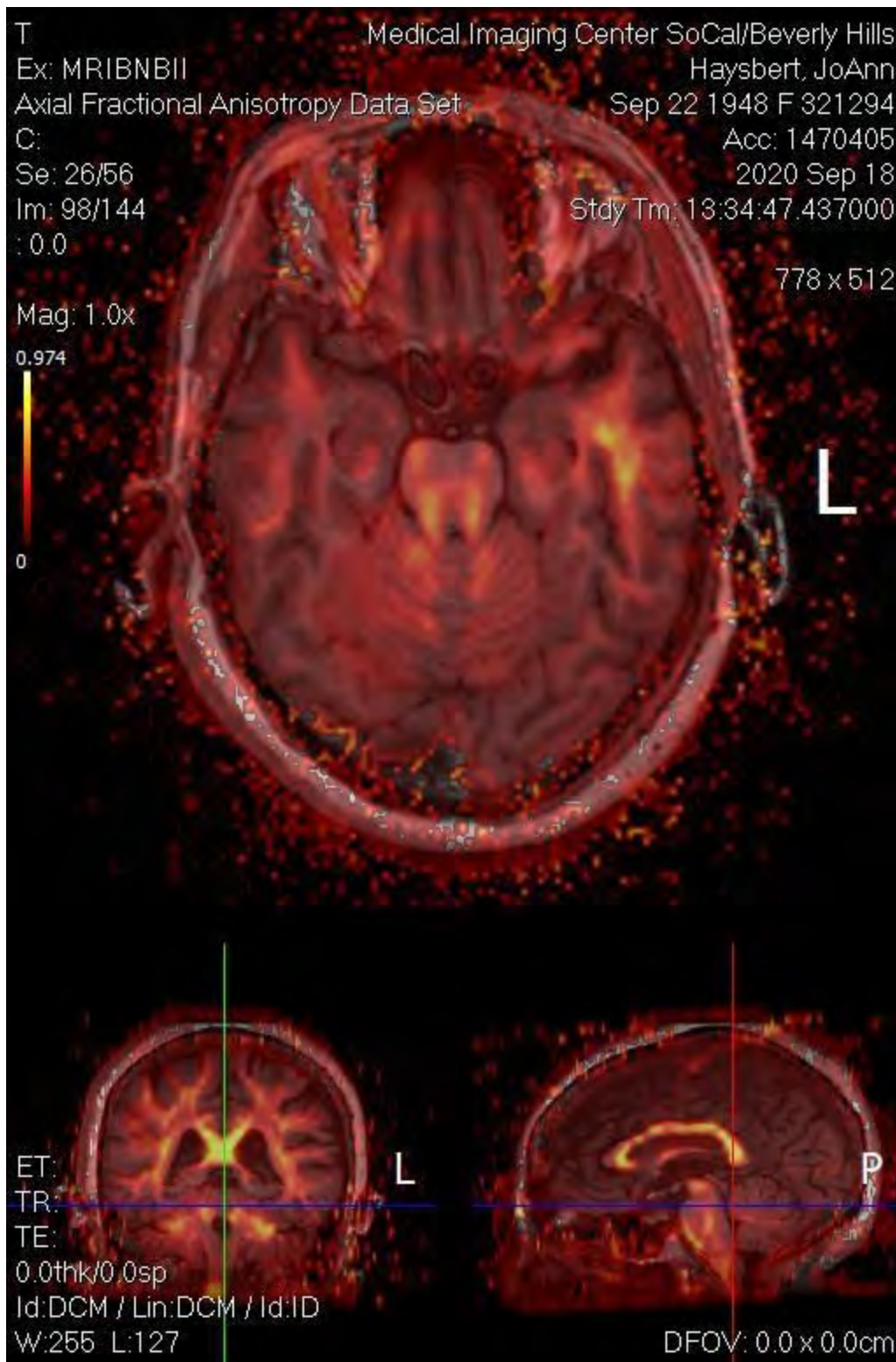
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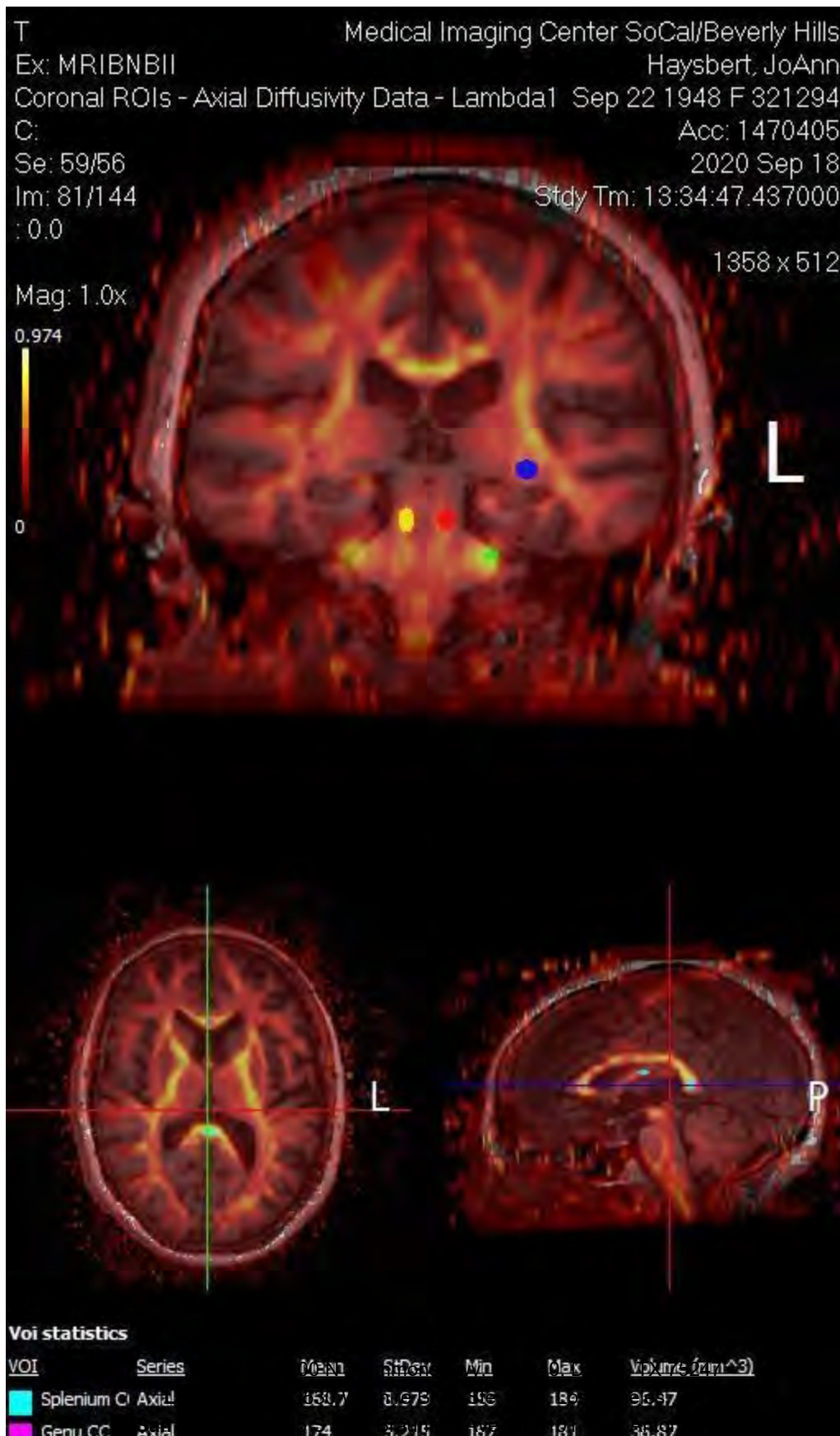


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Voi statistics						
VOI	Series	Mean	StDev	Min	Max	Volume (mm^3)
	Splenium Cl Axial	168.7	8.979	156	184	96.47
	Genu CC Axial	174	5.215	167	181	36.87
	R Corona r1 Axial	132.2	6.459	123	142	117.5
	L Corona r2 Axial	122.4	2.066	118	124	72.6
	R Superior Axial	117.1	8.544	102	127	92.98
	L Superior f Axial	109.3	11.96	94	131	129.9
	R Parietal L Axial	120.8	7.581	108	135	115
	L Parietal L1 Axial	113.1	5.154	102	121	166.2
	R Occipital Axial	144.6	5.457	137	152	71.39
	L Occipital l Axial	124.3	16.5	108	160	81.62
	R Temporal Axial	142.6	7.648	129	150	110.1
	L Temporal Axial	111.4	11.57	95	129	81.62
	R Uncinate Axial	135.9	5.54	125	143	76.5
	L Uncinate Axial	109.7	8.062	98	122	101.4
	R Arcuate f Axial	97.5	2.345	96	102	120.5
	L Arcuate F Axial	117	12.84	98	135	98.48
	R Hippocam Axial	112.9	6.342	103	126	144.7
	L Hippocam Axial	111.1	5.092	102	120	108.1
	R Fimbria F Axial	138	15.32	114	156	73.25
	L Fimbria Fr Axial	126.5	27.09	85	180	117.9
ET:	Ant Fornix Axial	251.1	36.93	206	322	57.56
TP:	Post Fornix Axial	282.3	59.58	200	363	82
TE:	R Mid Cereb Axial	120	11.37	105	134	88.36
0.0thk/0.0sp	L Mid Cereb Axial	131.6	6.762	125	143	78.16
Id:DCM / Lp:DCM / Id:ID	R Medial L1 Axial	166.5	12.7	145	184	117.2
W:255 L:127	L Medial L1 Axial	189.7	20.12	142	210	109.2

DEGV: 0.0 x 0.0cm

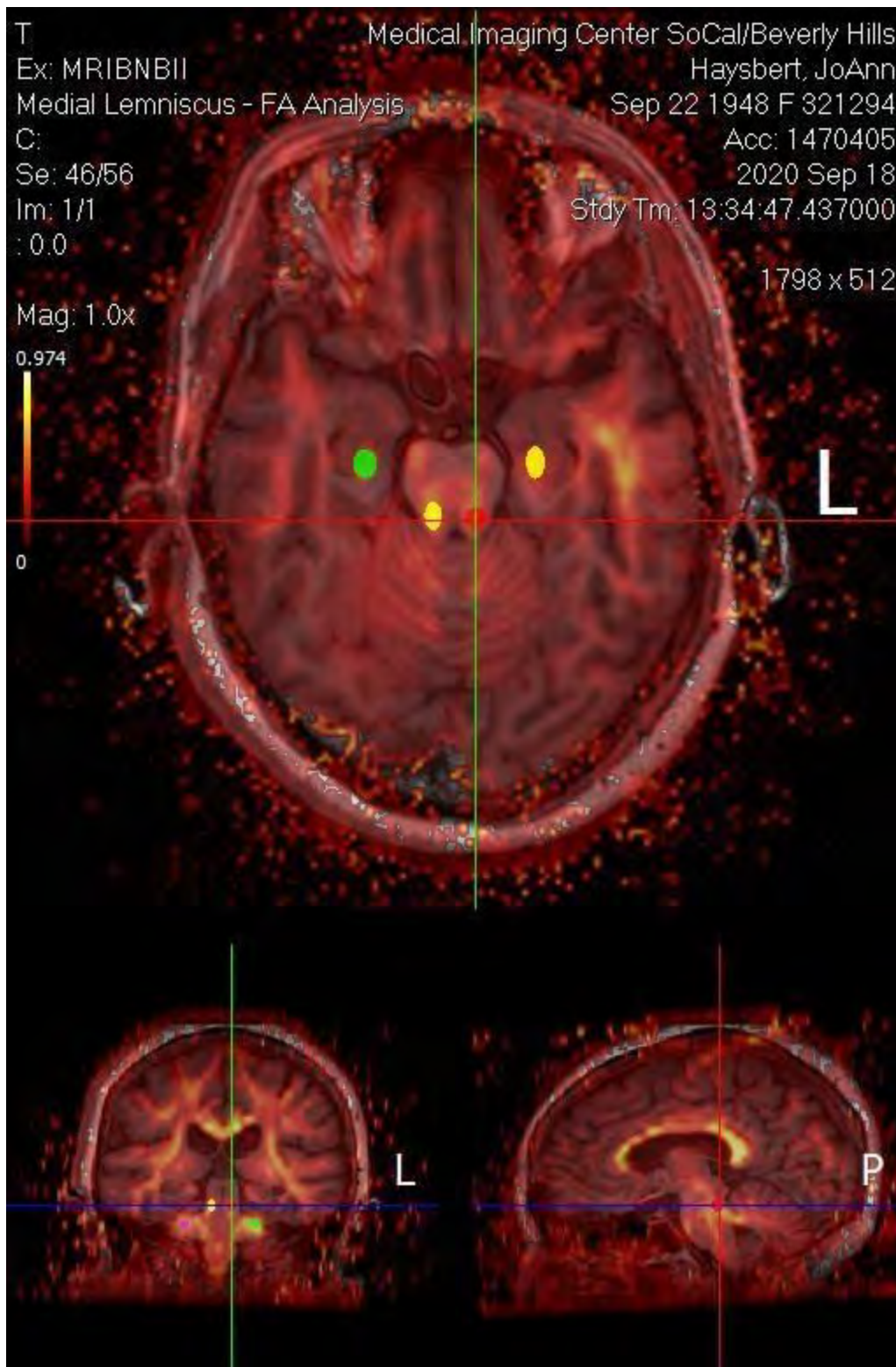
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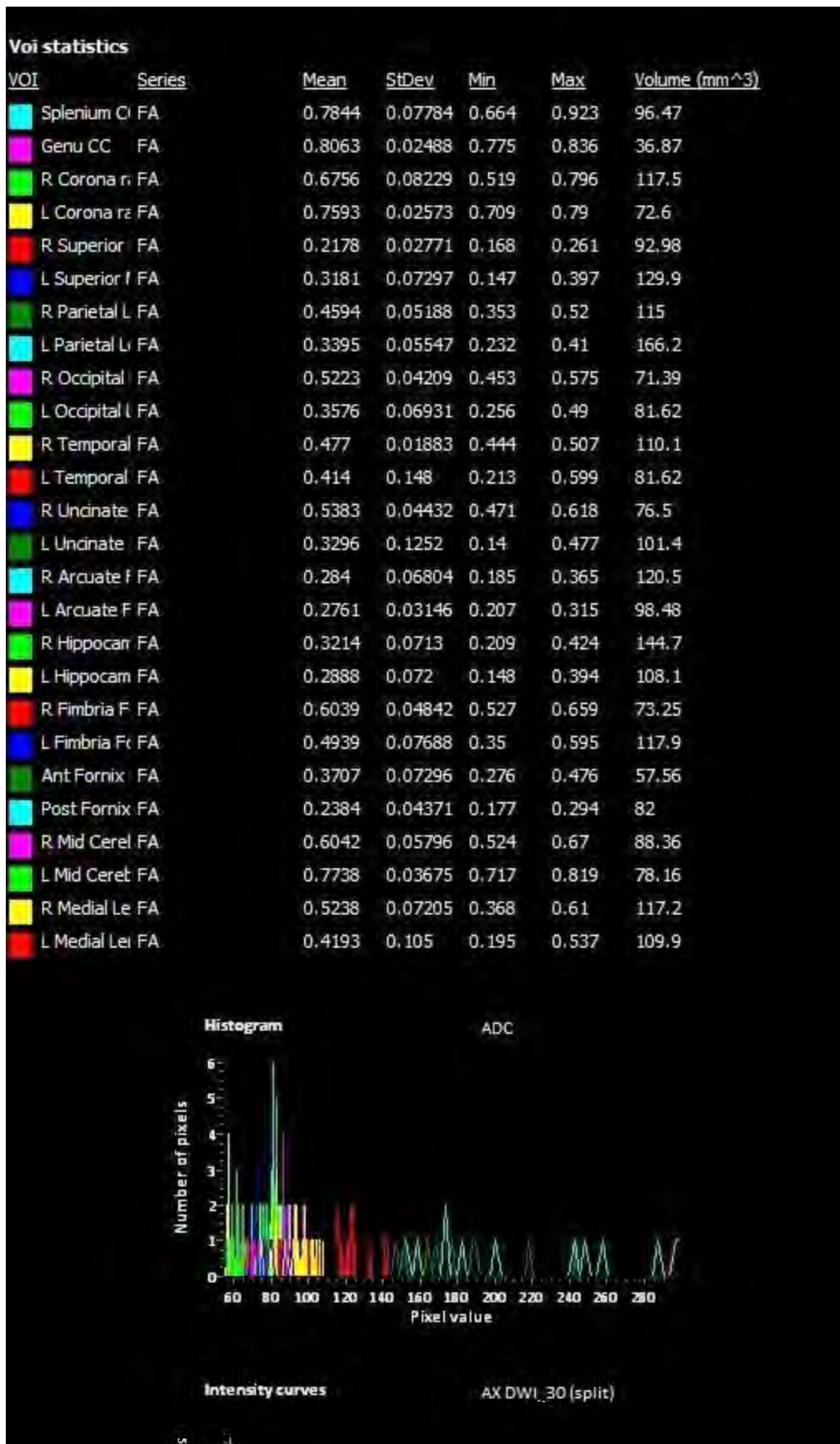
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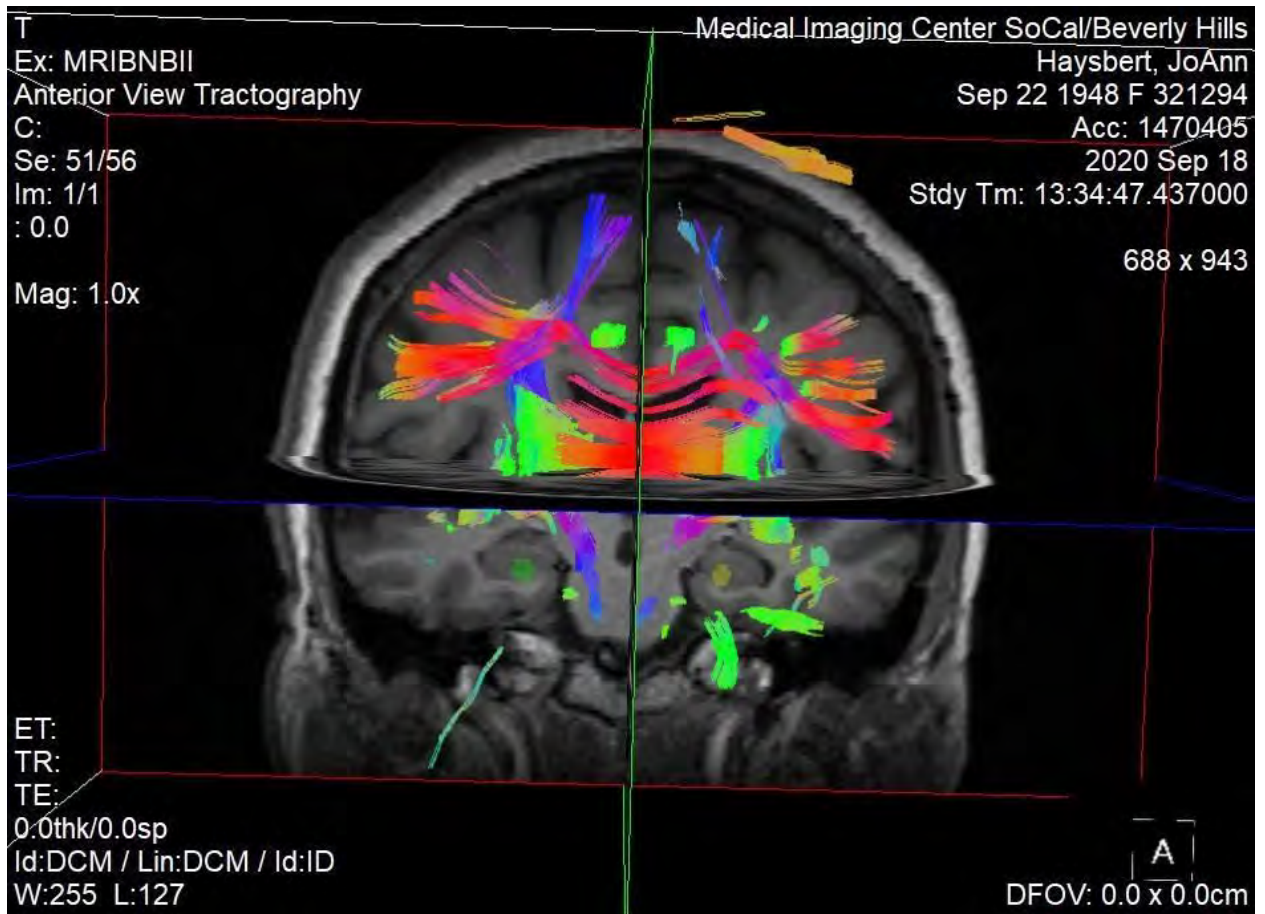
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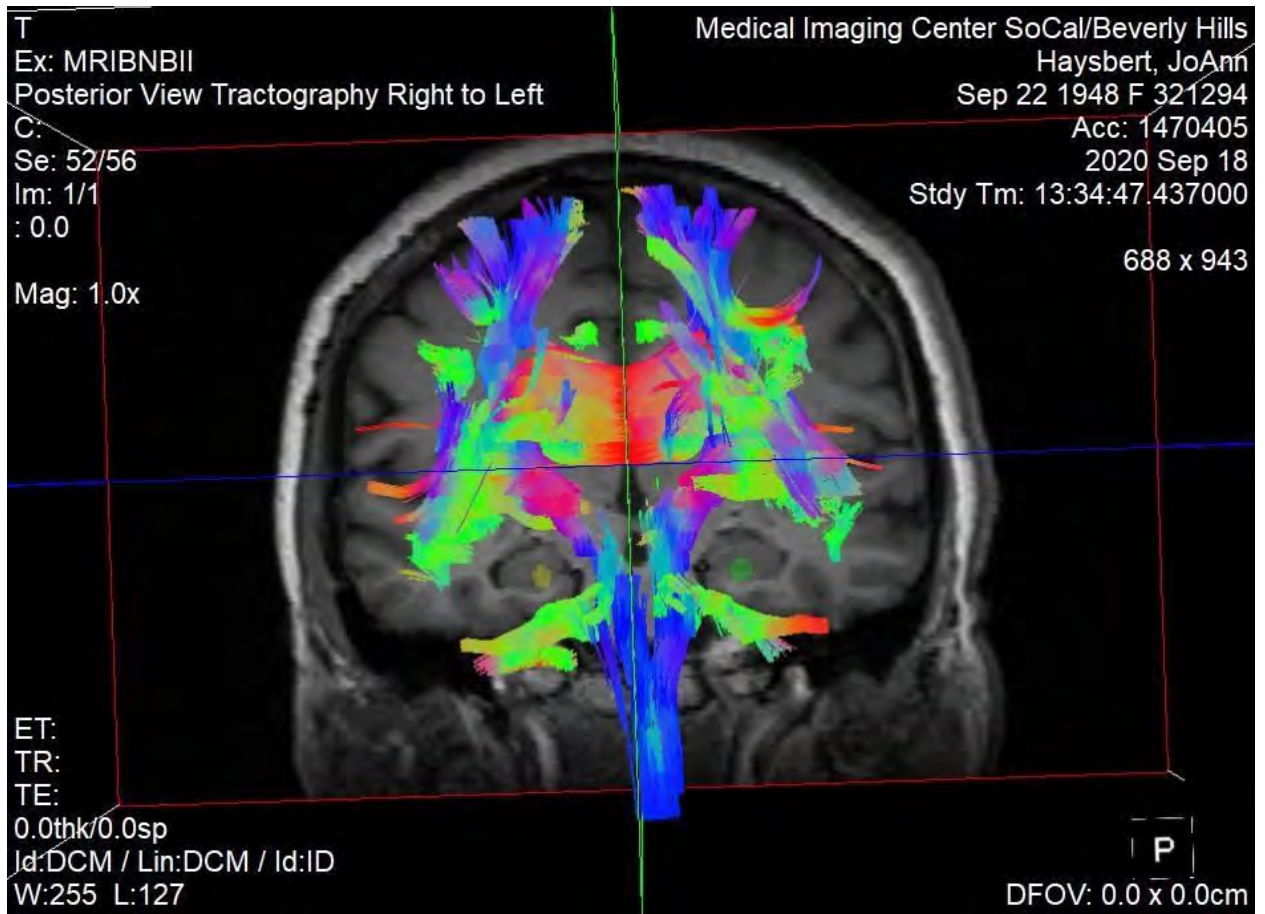
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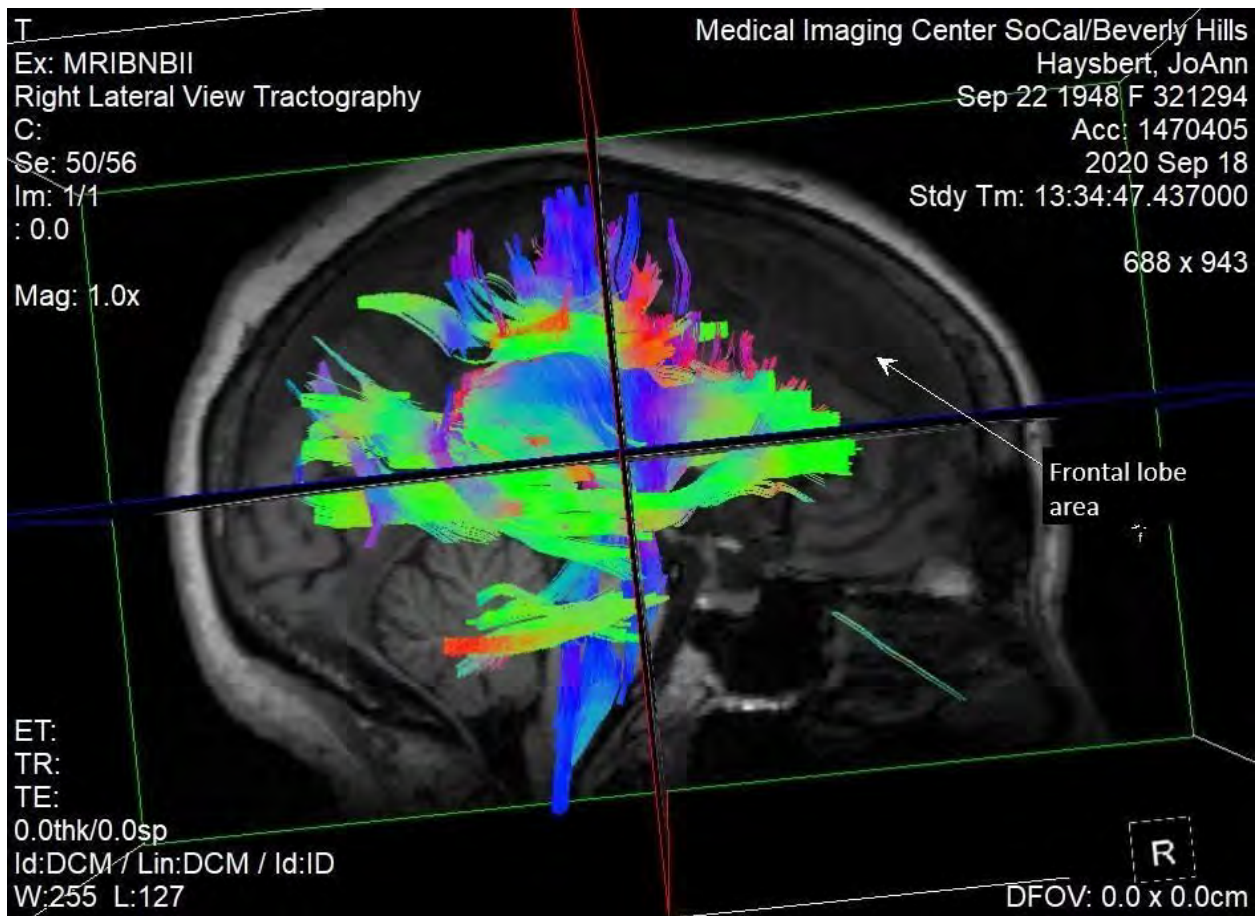
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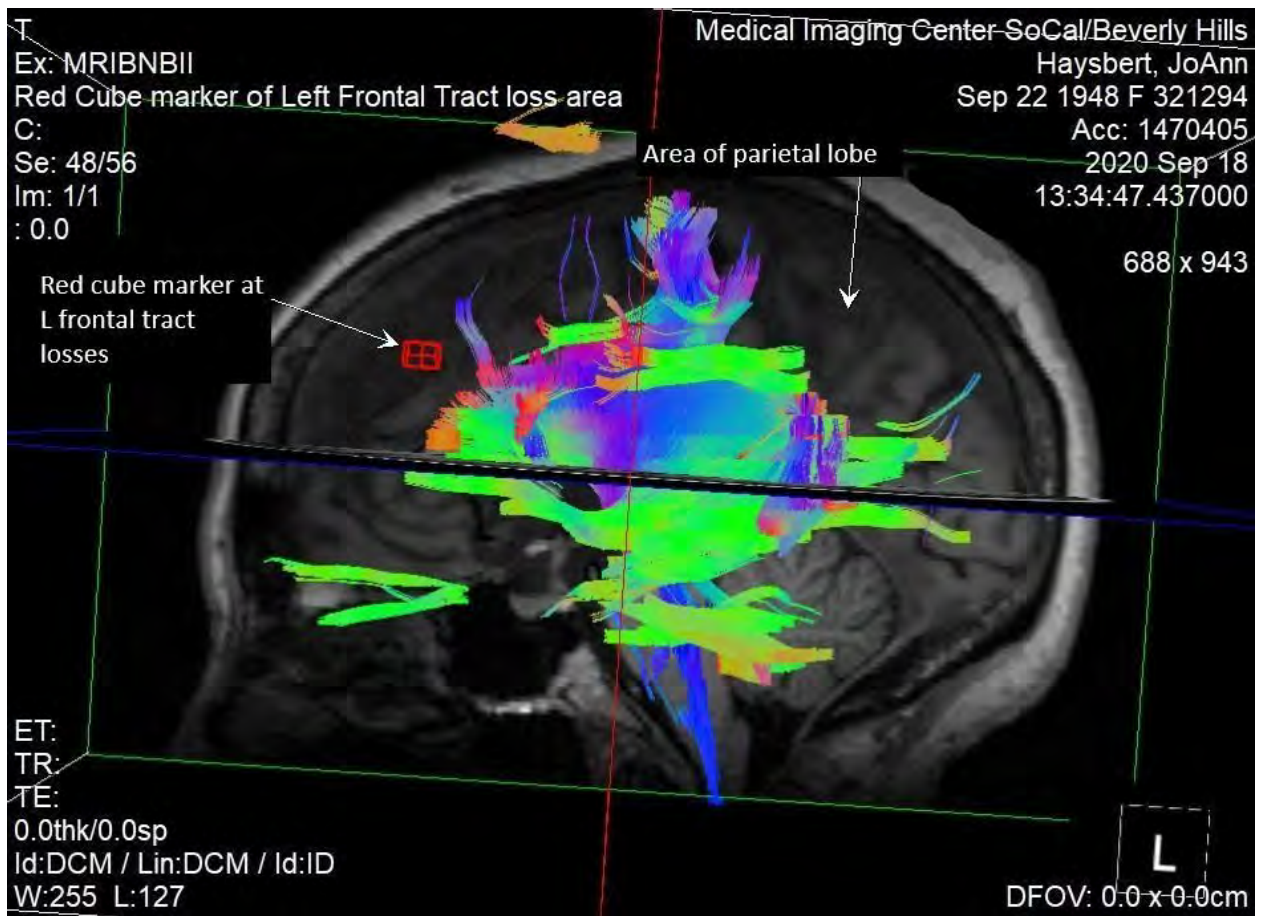
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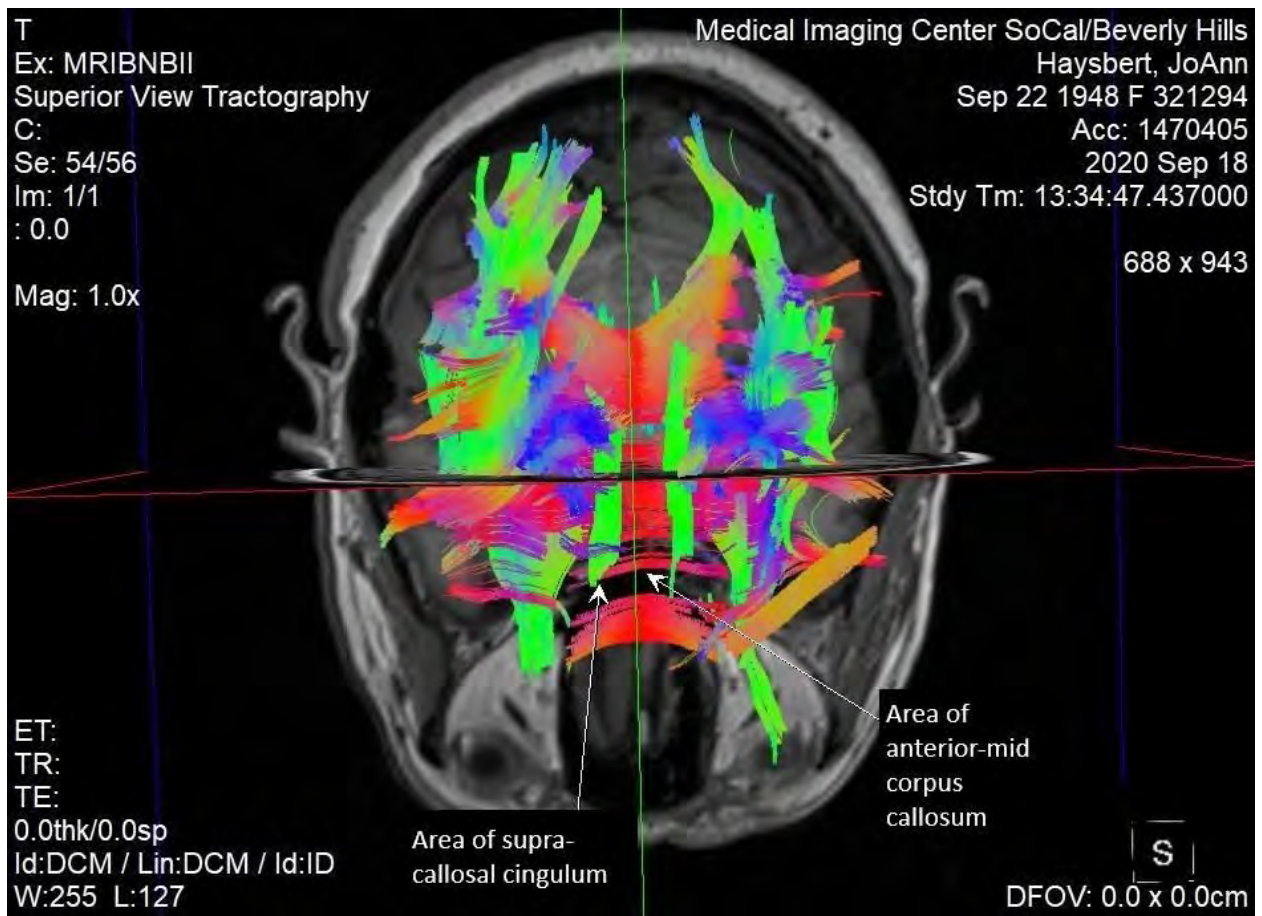
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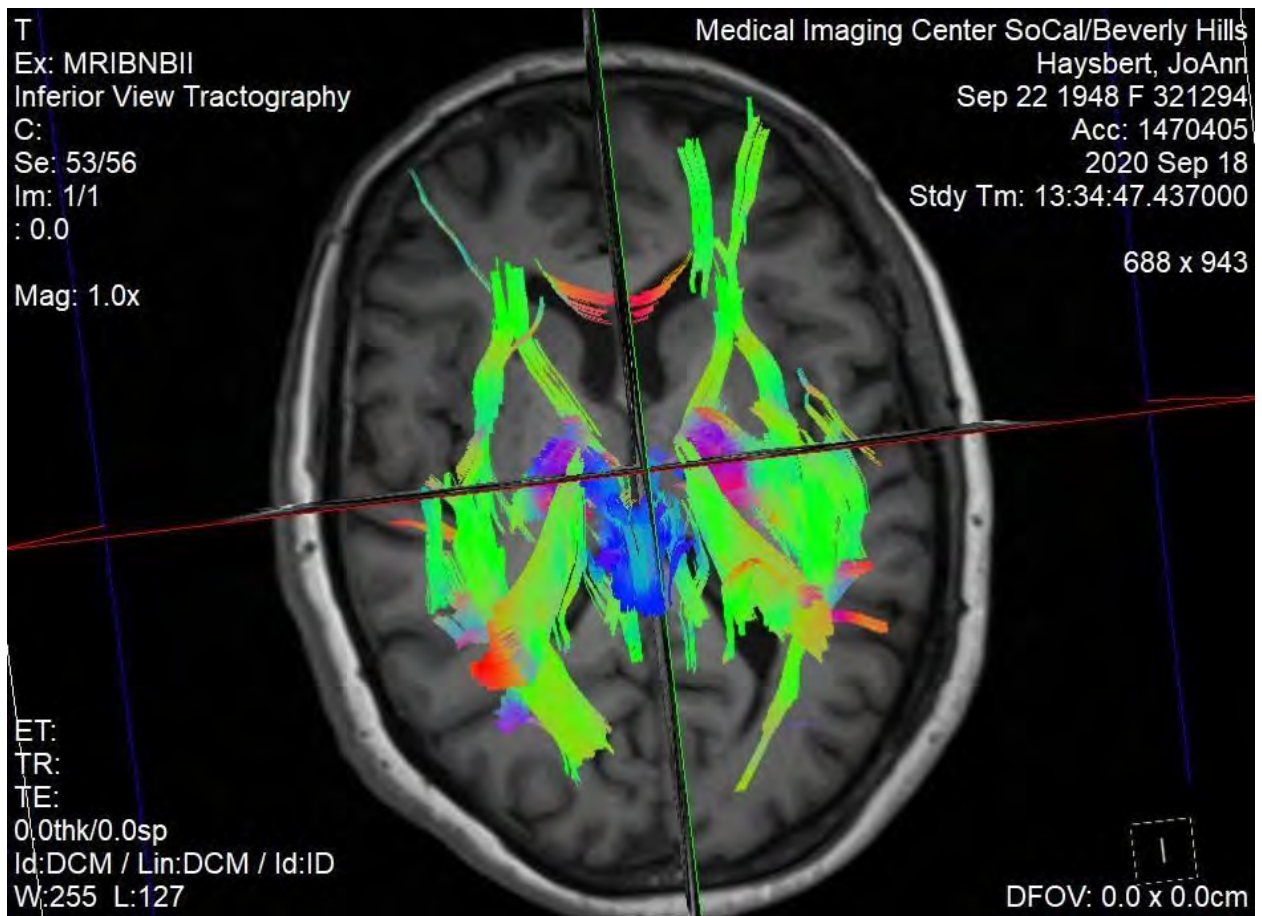
Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77801

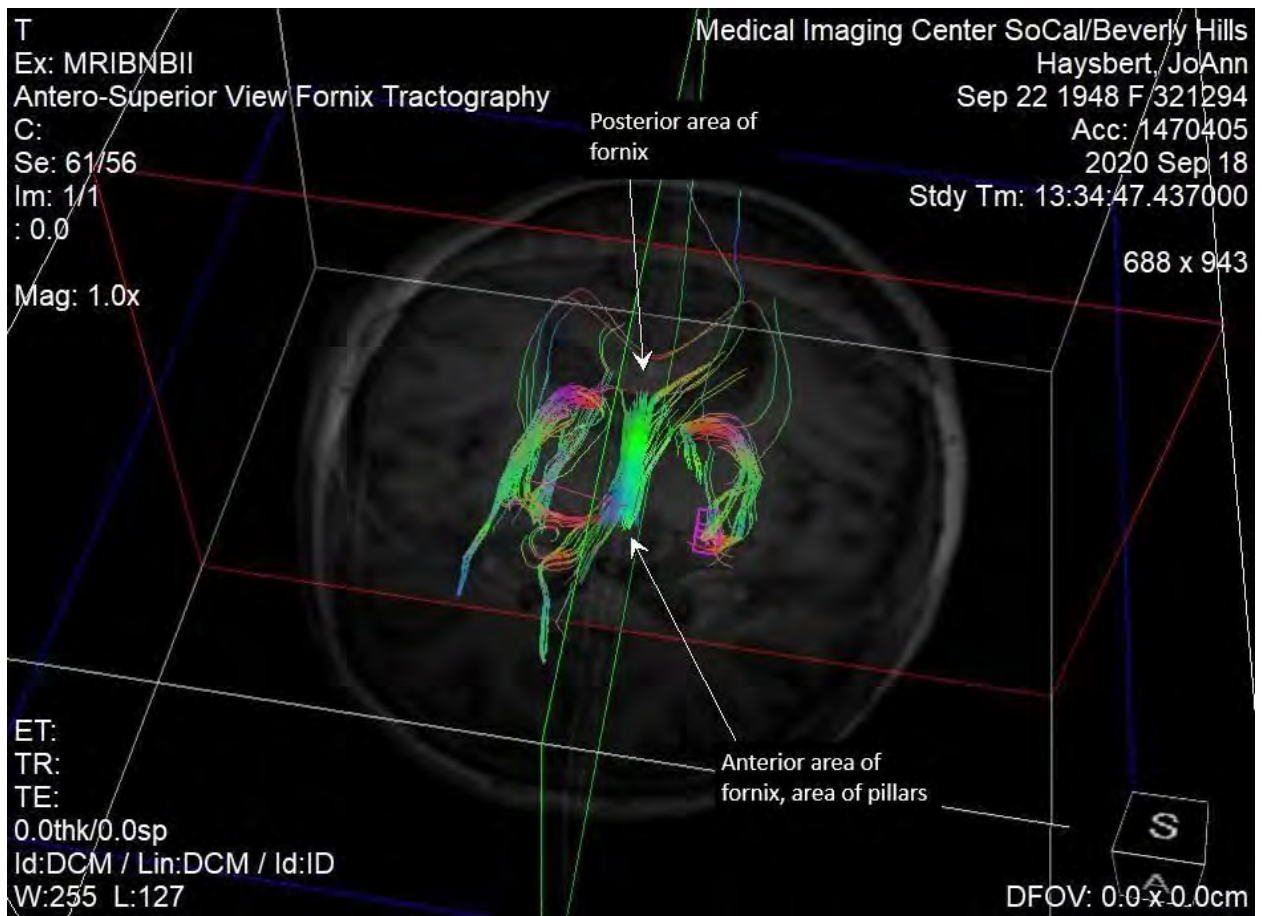
Dallas: 7800 N Stemmons Fwy, Ste 340, Dallas, TX 75247

Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

San Antonio: 8235 S New Braunfels Ave, Ste 101, San Antonio, TX 78223

Exhibit B





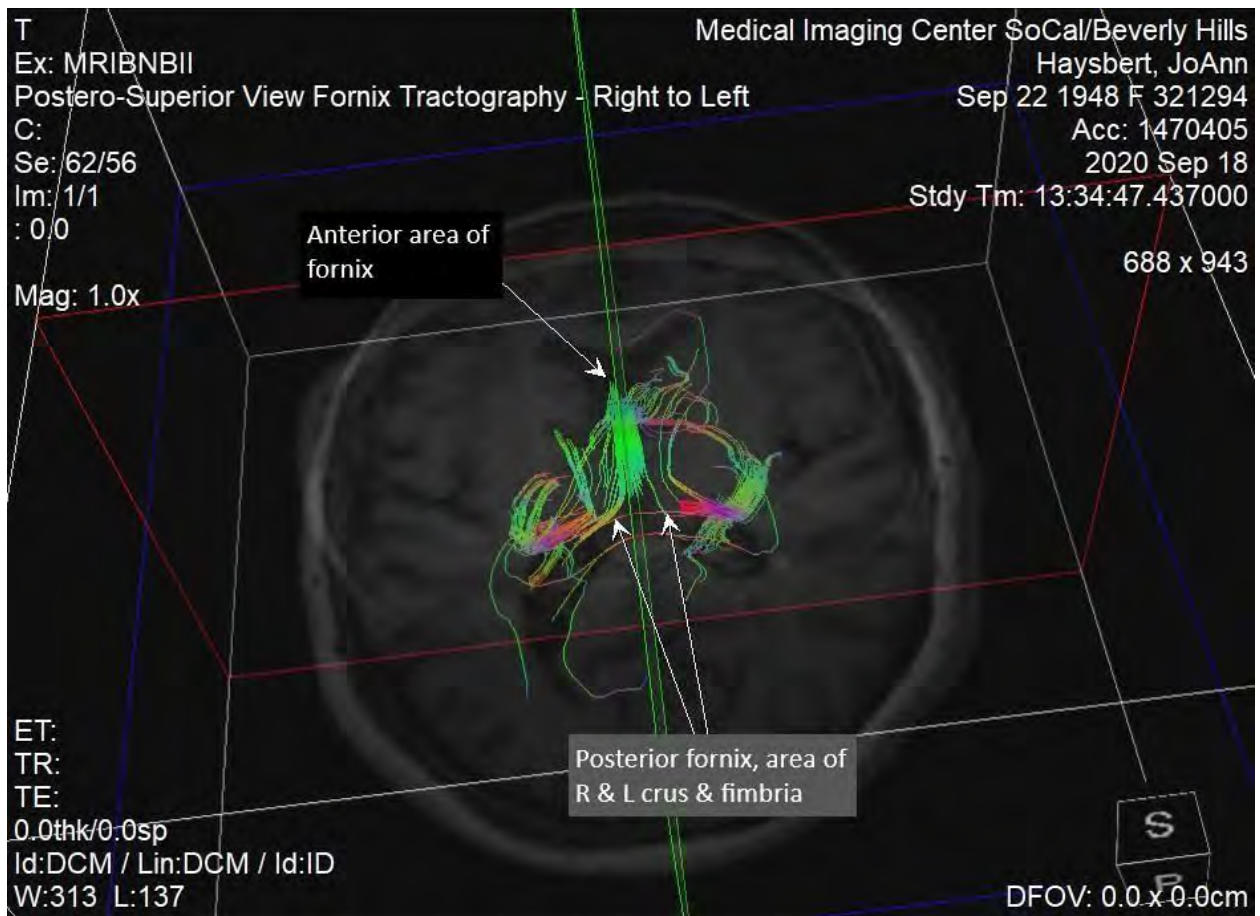
Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77801

Dallas: 7800 N Stemmons Fwy, Ste 340, Dallas, TX 75247

Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

San Antonio: 8235 S New Braunfels Ave, Ste 101, San Antonio, TX 78223

Exhibit B



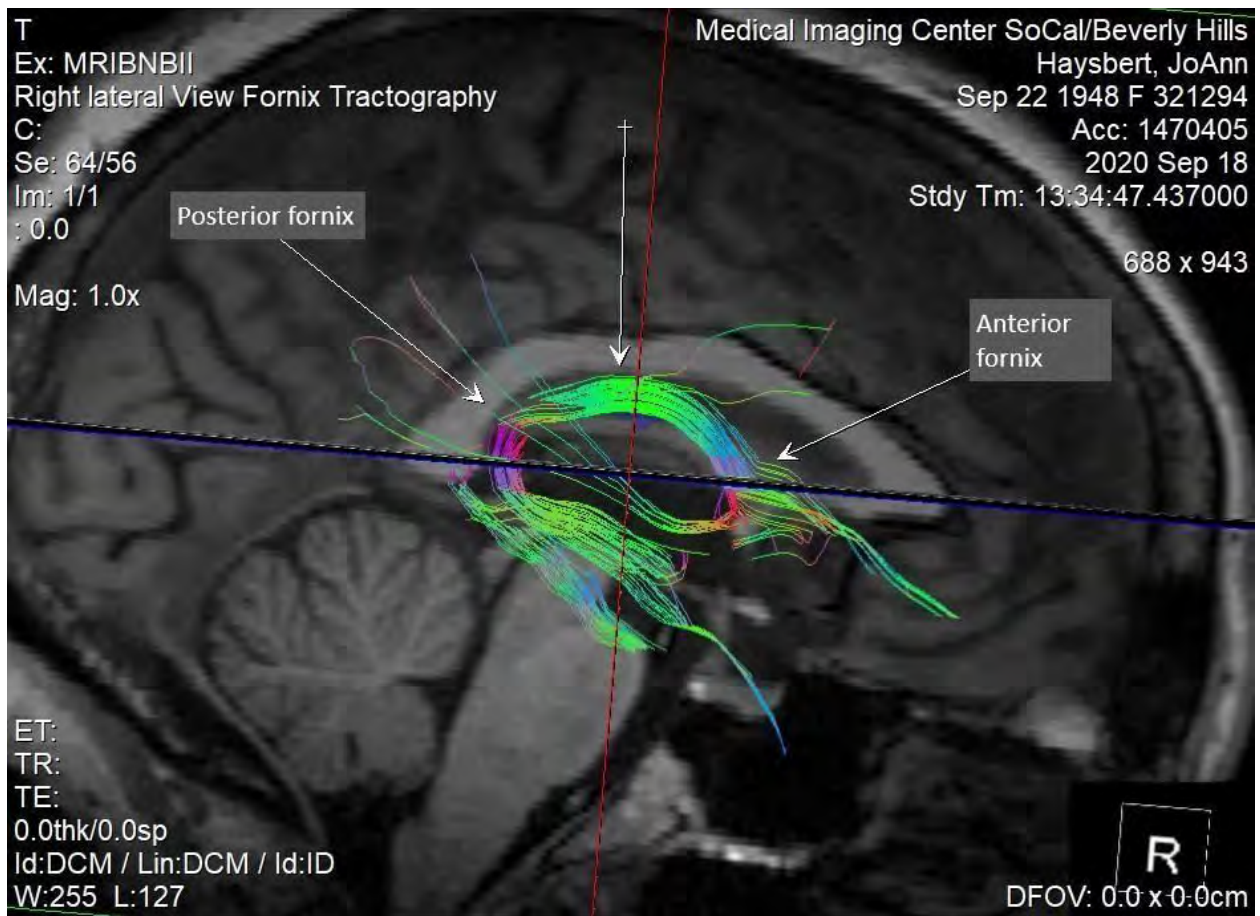
Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77801

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Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

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Exhibit B



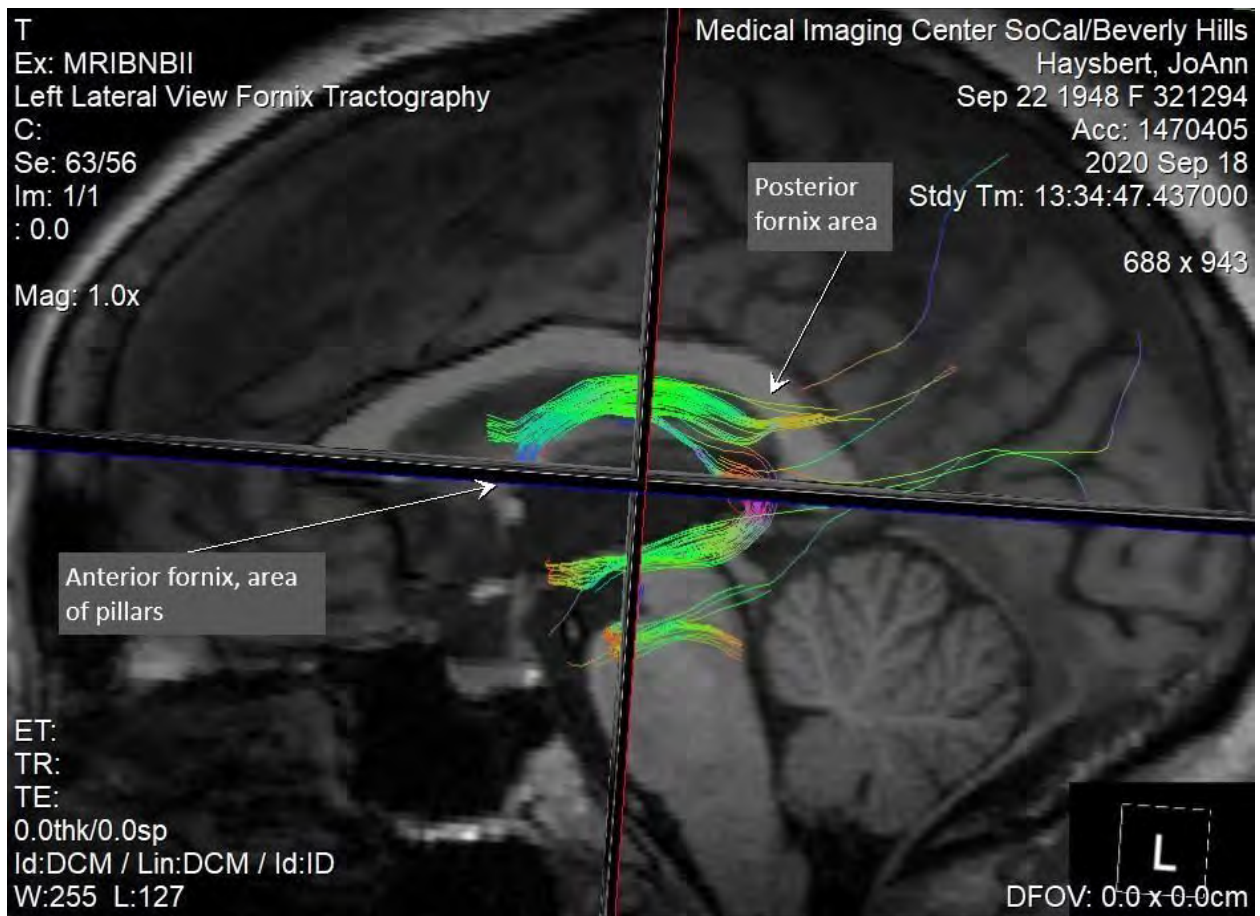
Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77801

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Exhibit B



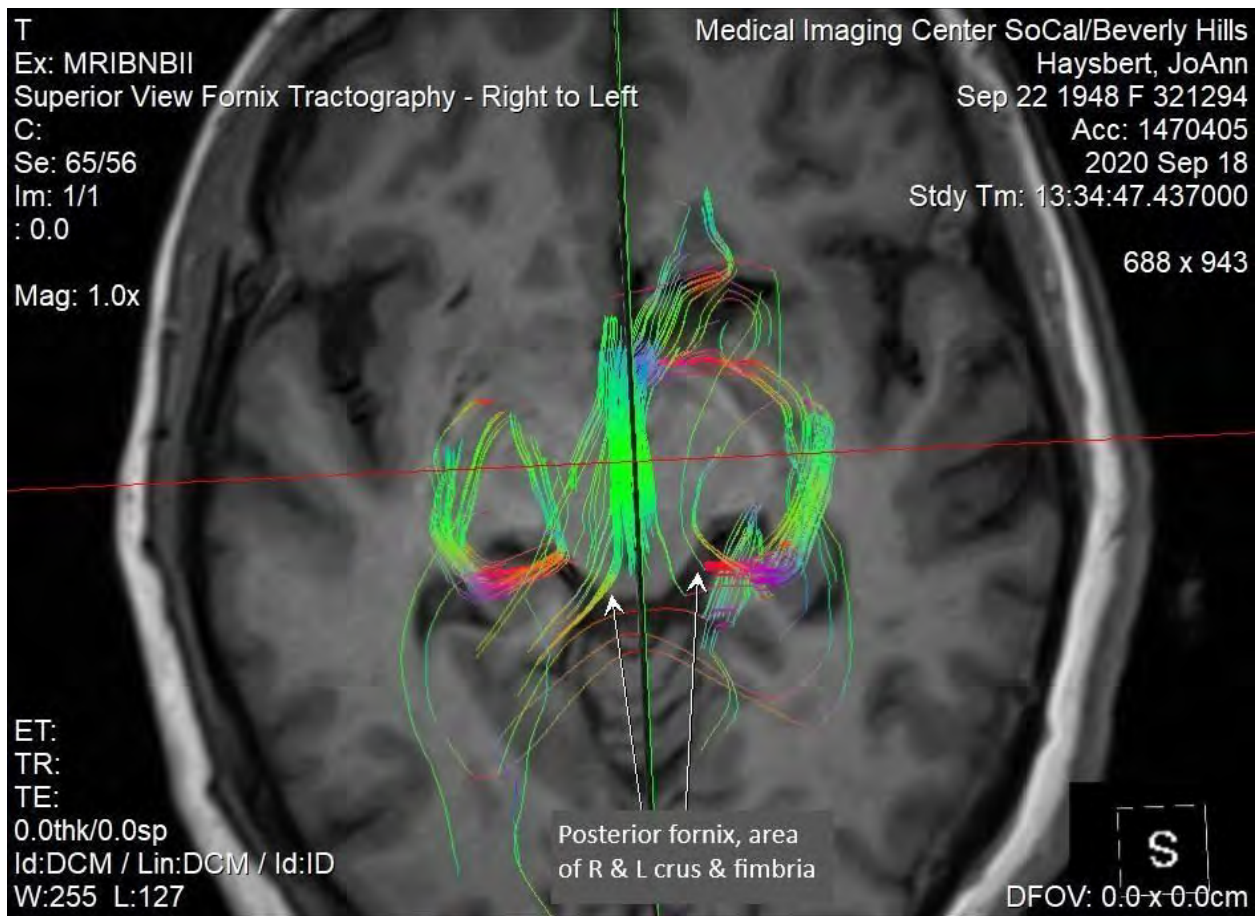
Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77801

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Exhibit B



Routine Brain and SWI MRI FINDINGS: These images demonstrate the brain anatomy at 3-Tesla and using a number of image sequences and image planes. The brain images are obtained in coronal, axial, and sagittal planes and include the following the coronal T2 MP GRE HEMO and or SWI (SWAN) sequence for micro bleeds, sagittal T2 FLAIR, axial T2 FLAIR, axial T2, axial T1 MP RAGE, coronal T2 FLAIR FS, as well as a variety of analytical evaluations including susceptibility-weighted imaging (SWI) and maximum intensity projection SWI in the coronal plane. Susceptibility weighted imaging accentuates the effect of elemental iron deposited in a brain location by bleeding or “micro-hemorrhages” in the past.

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Exhibit B

IMAGE FINDINGS: The routine brain imaging shows generally normal gyral-to-sulcal proportions for age and just some very slight generalized atrophy. The ventricles are generally normal in size, shape and position, with just some slight dilatation, particularly in the posterior occipital horn on the left side, which may reflect some tissue loss such as an atrophy process, perhaps possibly prior stroke or congenital right to left difference. The cerebellar tonsils are normal in position. The pineal region generally is normal. The FLAIR imaging demonstrates extensive FLAIR abnormalities which are expected for age. These are of unclear clinical significance. They are distributed bilaterally through posterior parietal lobe, occipital, and frontal lobes. These may reflect microvascular abnormalities, infectious abnormalities, they can reflect trauma. The general and diffuse distribution tends to suggest chronic, perhaps asymptomatic basis. The clinical significance is unclear. The susceptibility-weighted imaging does not demonstrate any clear areas of microhemorrhage. There is no mass effect or midline shift. There are no extra axial collections of fluid or blood. The sella and parasellar regions are normal. The posterior fossa is normal. The mastoid cells are clear. The sinuses and orbits are normal.

IMPRESSION and OVERALL IMPRESSION: Overall impression is generally normal routine brain imaging with some expansion of the left occipital horn of the lateral ventricle which may reflect some prior volume loss. Extensive FLAIR abnormalities of unclear clinical significance, not specifically related in location to the areas of fractional anisotropy losses. The fractional anisotropy analysis and the tractographic analysis both demonstrate problems in the frontal lobe associated with the white matter stem of the superior, middle and inferior frontal gyri with expected effects of impairment of multistep planning, map-based planning and emotional control release functions. Both demonstrate problems in the angular gyrus in the left parietal lobe which for this right-handed individual would be expected to have the effect of impairment of word finding and calculation ability. Losses appreciated both in both evaluations with regard to the arcuate fasciculus which can affect prosody or flow of speech as well as the other aspects of speech processing. There are losses in the fornix which would be expected to have the effect of impairment of new memory formation. The tractographic analysis additionally demonstrates problems bilaterally in the supra-callosal cingulum which would have the expected effects of increased anxiety and depression. The fractional anisotropy analysis additionally demonstrates some low numbers for the occipital lobe on the left which may reflect impairment of processing of visual information arising on the right side of the body. Some low numbers for the left uncinate fasciculus and inferior frontal occipital fasciculus, not quite statistically significant, but may reflect problems such as flattening of affect and loss of emotional drive and some types of visual recognition phenomena. There are low numbers in the left hippocampal cingulum and to a lesser extent in the right hippocampal cingulum which may reflect problems with attention, and some low numbers on the medial lemniscus, particularly on the left side, which may reflect impairments associated with the midbrain such as difficulties with pupillary accommodation, eye movement, convergence, and possible associated with symptoms such as photophobia. Overall, these findings demonstrate

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multiple abnormalities which would be expected to have effects on cognition, emotional behavior and neurologic functions as detailed above. The severity of the abnormalities appreciated in the imaging would be expected to have clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

Signed:



Aaron Filler, MD, PhD
Neurography Institute Medical Associates

Diplomate, American Board
of Neurological Surgery

Fellow of the Royal College of
Surgeons of England

Fellow of the Intercollegiate Board in
Surgical Neurology of England,
Ireland, Edinburgh & Glasgow

Fellowship in Complex Spinal Surgery
- UCLA

Fellowship in Peripheral Nerve
Surgery-
LSU

Director, Institute for Nerve

Medicine, Santa Monica, CA

Director, Center for Advanced
Spinal Neurosurgery, Santa
Monica, CA



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Curriculum Vitae

June 25, 2020

Aaron G. Filler, MD, PhD, FRCS, JD

President (2015-16) & General Counsel - Society for Brain Mapping and Therapeutics
Diplomate, American Board of Neurological Surgery
Fellow of the Royal College of Surgeons of England
Fellow of the Intercollegiate Board in Surgical Neurology of England, Ireland,
Edinburgh & Glasgow
Fellowship in Complex Spinal Surgery - UCLA
Fellowship in Peripheral Nerve Surgery - Louisiana State University, New Orleans, LA
Fellowship in Neuroimaging - University of London
Director, Institute for Nerve Medicine, Santa Monica, CA
Director, Center for Advanced Spinal Neurosurgery, Santa Monica, CA
Medical Director, Neurography Institute, Santa Monica, CA
Section Editor for Peripheral Nerve,
Youmans & Winn Textbook of Neurological Surgery
Lieutenant Colonel, US Army Reserve, Medical Corps, Retired
Commander, 1466th Med Team, Neurosurgery, United States Army Reserve, Retired
Course founder: Biomechanics & Comparative Primate Anatomy, Harvard University
Joint Guidelines Committee, American Association of Neurological Surgeons &
Congress of Neurological Surgeons – Washington Committee
Guidelines Committee, Disorders of Spine & Peripheral Nerve Section - AANS & CNS
Spinal Fusion Guidelines Reviewer - American Association of Neurological Surgery &
Congress of Neurological Surgery – Washington Committee (2013)
Course Director - Billing and Coding: Medicine and Law
- American Society for Peripheral Nerve 2013-2014
Course Faculty - Peripheral Nerve Surgical Anatomy and Dissection Course for
for Neurosurgery Senior Residents (2014)
Neuroscience Research and Education Fund, AANS, Baltimore, MD
Cedars Sinai Medical Staff, Continuing Education Committee Member (2014 to 2016)
State Bar of California No. 302956, President - Tensor Law, P.C.

Office Address

California:

Institute for Nerve Medicine
900 Wilshire Blvd., Suite 310
Santa Monica, CA 90405
Phone: (310) 314-6410
Fax: (310) 314-2414

E-Mail: afiller@nervemed.com
Web: www.nervemed.com
Web: www.backpain-guide.com

Date of Birth

October 21, 1956

Place of Birth

Washington, D.C.

Exhibit B

Education

High School	Walt Whitman H.S., Bethesda, MD	(9/71 – 6/74)
BA '77 with honors	University of Chicago, Chicago, IL	(9/74 – 6/77)
	Date of Diploma: June 20, 1977	
MA '79	University of Chicago, Chicago, IL	(9/77 – 6/79)
	Date of Diploma: December 17, 1979	
MD '86	University of Chicago, Chicago, IL	(9/77 – 6/79 & 6/84 – 6/86)
	Date of Diploma: June 13, 1986	
PhD '86	Harvard University, Cambridge, MA	(8/79 – 6/86)
	Date of Diploma: June 5, 1986	
Neurosurgical Residency	University of Washington, Seattle, WA	(6/86-6/94)
FRCS (SN) '94	Intercollegiate Board in Surgical Neurology Royal Colleges of Surgeons, England, Glasgow, Edinburgh, and Ireland	
FRCS '07	Fellow of the Royal College of Surgeons of England	
JD '14	Concord Law School, Kaplan University	(9/10-12/14)
	Date of Diploma: January 2, 2015	

Post-Graduate Medical Education

6/86 – 6/94	Neurosurgical Residency Department of Neurological Surgery University of Washington, Seattle, WA General Surgery Rotating Internship (6/86-6/87) Neurosurgical Resident & Chief Resident (7/87-6/94) Univ. of Washington Hospitals and Clinics Harborview Medical Center, Seattle, WA Seattle Veterans Administration Hospital Children's Hospital Medical Center, Seattle, WA Atkinson Morley's Hospital, London, U.K. & St. George's Hospital Med School, London, UK Including 18 months MRI Basic Science & Research 12/90 to 5/92
6/94 – 6/95	Wellcome Trust Clinical Fellow in Magnetic Resonance Nerve Imaging CRC Magnetic Resonance Research Group Div. of Biochemistry, St. George's Hosp. Med. School, & Departments of Neurosurgery and Neuroradiology

Atkinson Morley's Hospital, London, U.K.

7/95 – 6/96 Spine Fellow
Professors Ulrich Batzdorf, J. Patrick Johnson, Duncan McBride
Complex Spine Reconstruction and Syringomyelia
Division of Neurosurgery
University of California Los Angeles
UCLA Medical Center, Los Angeles, CA

3/96 – 6/96 Peripheral Nerve Fellow
Professor David Kline
Department of Neurosurgery
Louisiana State University
New Orleans, LA

Legal Education

2/2015 California Bar Exam 2/24/15 - 2/26/15
- passed at first opportunity

9/7/2010 – 12/2014 JD - Concord Law School (12/12/14)
Los Angeles, California
Date of Diploma 1/3/15

10/2011 FYLSE – State Bar of California (October 25, 2011)
First Year Law Students Examination
– passed exam at first opportunity

11/2013 MPRE - Multistate Professional Responsibility Exam
- passed exam at first opportunity

11/2013 - present Certified Law Student - California State Bar
PTLS - Practical Training of Law Students
California Rules of Court 9.42
Certification #: 34114

9/2010 – present California Bar Association
Student File # 403403

Academic and Faculty Positions

2008 - 2009	Section Editor - Peripheral Nerve Surgery - Youman's Textbook of Neurological Surgery, 6th Edition Elsevier. (in press). Richard Winn, Editor in Chief
2005 - 2008	Director, Peripheral Nerve Surgery Program Cedars Sinai Medical Center & Neurosurgical Residency Program Cedars Sinai Medical Center, Los Angeles, CA
2001 - 2005	Director, Peripheral Nerve Surgery Program Century City Hospital, Los Angeles, CA
1996 - 2001	Assistant Professor of Neurosurgery, UCLA Co-Director, UCLA Peripheral Nerve Surgery Program Co-Director, UCLA Interventional MRI Program Director, UCLA Pediatric & Obstetric Brachial Plexus Injury Program Associate, Comprehensive Spine Program Faculty, Neurosurgical Spine Surgery Fellowship Prog. Division of Neurosurgery UCLA Medical Center Los Angeles, CA
1995 - 2001	Clinical Assistant Professor Department of Neurological Surgery University of Washington, Seattle
2000	Faculty, Review Course for Board Certification American Association of Neurological Surgeons
1995 - 1996	Clinical Instructor Division of Neurosurgery UCLA Medical Center
1994 - 1995	Wellcome Trust Lecturer Division of Clinical Neuroscience & Division of Biochemistry St. George's Hospital Medical School University of London, London, U.K.
1992 - 1994	Acting Instructor in Neurological Surgery Department of Neurological Surgery University of Washington, Seattle

1991 - 1992	Clinical Lecturer - NeuroImaging Division of Biochemistry & Clinical Neuroscience Unit St. George's Hospital Medical School
1990 - 1991	Visiting Research Fellow Division of Biochemistry Department of Cell & Molecular Science St. George's Hospital Medical School London, U.K.
1980 - 1983	Research Advisor for Undergraduates Biological Anthropology Harvard University
1980 - 1982	Special Lecturer - Biomechanics & Comparative Primate Anatomy - Laboratory Methods Course Biological Anthropology Harvard University
1979 - 1983	Teaching Fellow - General Ed., Biology & Biological Anthropology Harvard University Cambridge, MA
1977 - 1978	Research Fellow, Department of Anatomy, University of Chicago

Research Support

June '77 - August '77	University of Chicago School of Medicine, Medical Student Research Stipend Department of Anatomy, University of Chicago "Morphometric Analysis of Macropodid Skulls"
Feb. '81 - Feb. '84	NIH PHS Musculo-Skeletal Training Grant Department of Biology, Harvard University NIH PHS #5 T32 GM07117-09 0011 "Evolution of the Mammalian Spine"
Feb. '88 - Sept. '88	NIH Neurosurgery Training Grant Dept. of Neurol. Surg., Univ. of Washington Seattle 5T32 NS-07144-09 "Imaging of Axonal Transport"

Aaron G. Filler

June 25, 2020

Jan. '91 - May '92	Neurosciences Research Foundation Atkinson Morley's Hospital, Harrison Clinical Lectureship Division of Clinical Neuroscience, St. George's Hosp. Med. School, Univ. of London "MR Imaging of Axonal Transport" (\$80,000)
Oct. '91 - May '92	Nycomed Imaging, AS, Oslo, Norway - Academic Investigator Support Div. of Biochemistry, St. George's Hospital Medical School, University of London. Principle Investigator. "Axonal Transport of Ferrite MR Contrast Agents" (\$25,000)
May '94 - June '95	Wellcome Trust Clinical Fellowship Division of Clinical Neuroscience & Division of Biochemistry St. George's Hospital Med. School, Univ. of London "MR Imaging of Neural Tracts" (\$75,000)
July '95 - June '96	UCLA Department of Radiological Sciences Pilot Assessment of MR Neurography for Cervical and Lumbar Spinal Imaging
Sept. '97 - Nov. '97	Nycomed Imaging, AS, Oslo, Norway - Black blood contrast agents for enhancement of Neurography - pilot study. (\$10,000)
Jan. '98 - June '99	U.K. Dept of Trade and Industry - SynGenix LTD, Targeted Drug Delivery to the CNS. (\$100,000)
Jan. '99 - Dec. '01	SynGenix LTD Axonal Transport for Drug Delivery (\$1.3 million)
Sept. '01 - Sept. '03	SynGenix LTD Axonal Transport for Drug Delivery (\$8 million)

Academic Meeting Session Chairman

3/20/2010	Filler AG. MRI Imaging. 2 nd Chongqing International Clinical Neuroscience Forum & International NeuroDrug Conference, Chongqing, People's Republic of China, 2010重庆国际神经病学论坛
-----------	---

6/25/2010	Filler AG. MRI Imaging. NeuroTalk BIT 1 st Annual Congress, Singapore. June 25, 2010.
3/15/2012	Filler AG. Neuroscience Imaging. International Neuroscience Conference – Omori Medical Center, Toho University, Tokyo, Japan, 東邦大学医療センター大森病院
5/14/2013	Filler AG. Multi-modality Imaging. Society for Brain Mapping & Therapeutics, 10 th Annual World Congress. Baltimore Convention Center, Baltimore, MD
1/11/2014	Filler AG and Malessy MJ. General Scientific Session. American Society for Peripheral Nerve, Maui, Hawaii
1/12/2014	Filler AG. Medical and Legal Aspects of Coding and Billing for Peripheral Nerve Surgery. American Society for Peripheral Nerve, Maui, Hawaii
3/7/2015	Filler AG. Peripheral Nerve Session I Society for Brain Mapping and Therapeutics, Los Angeles Convention Center, Los Angeles, California
4/8/2016	Filler AG. Policy, Ethics and the Law in Neuroscience: Society for Brain Mapping and Therapeutics, Miami Florida.

Medical & Board Certifications

1987	Diplomate National Board of Medical Examiners of U.S.A. NBME # 214994
1994	Diplomate American Board of Neurological Surgeons, Primary Exam for Board Eligibility
1994	Diplomate Neurological Surgery Residency Training Department of Neurological Surgery University of Washington, Seattle, WA

1994 Diplomate
 Intercollegiate Board in Surgical Neurology
 of the Royal Colleges of Surgeons of
 Edinburgh, Glasgow, England, and Ireland.
 (equivalent to FRCS {SN})

1999 Diplomate
 American Board of Neurological Surgeons,
 Oral Exam for Board Certification
 ABNS Cert. #99073, 11/17/99 to 12/31/2009
 Recertification #17043, expiration 12/31/2019

Medical Licensure

California State
Physician & Surgeon G81778 7/
1995 - current

California State
Fluoroscopy Supervisor and Operator: RHC 145535
11/1998 - current

Florida
Medical License #: ME 118548
1/17/14 - current

Indiana
License #: 01070287A
9/29/2011 to current

Massachusetts
License #:245500
4/4/2012 to current

Michigan
Medical Doctor #:4301104352
12/3/2013 to current

New York State
License # - 254556
8/19/2009 to current

Nebraska
License # 26935
8/24/2012 to current

Ohio
License #: 35098599
2/5/2012 to current

Pennsylvania State
Medical Physician & Surgeon MD423086
10/03 – current

Utah State
Medical License 5267292-1205
1/27/2004 to 1/31/2006

Virginia
Medicine & Surgery License #0101252705
9/6/12 to current

Washington State
Physician and Surgeon License #MD00025619
6/30/88 - 10/21/06

U.K. General Medical Council
Medical Practitioner Limited Registration: 89/1233
12/89 - 5/95

U.K. General Medical Council
Medical Practitioner Full Registration: 4439398
7/97 - current

DEA: BF0683777
6/88 – current

Bar Admissions

State Bar of California
Bar Membership # 302956
May 18, 2015

Federal District Court,
Central District of California
June 17, 2015

Court of Appeals for the Federal Circuit
July 7, 2015

Court of Federal Claims
January 30, 2019

Advanced Cardiac Life Support Certification

3/06 - present	Advanced Cardiovascular Life Support (ACLS)
3/06 - present	Basic Life Support (BLS)
2/13 - present	Pediatric Advanced Life Support (PALS)

Medical Staff Privileges

6/94 – 6/96	University of Washington Medical Center, Seattle, WA
6/94 – 6/96	Harborview Medical Center, Seattle, WA
6/96 – 6/97	Madigan Army Medical Center, Seattle, WA
6/96 – 6/97	Olive View-UCLA Medical Center, Los Angeles, CA
7/96 – 7/09	UCLA Medical Center, Los Angeles, CA
5/01 – 7/05	Century City Hospital, Los Angeles, CA
1/04 – present	Midway/Olympia Hospital Med Center, Los Angeles, CA
7/01 - present	Cedars Sinai Medical Center, Beverly Hills, CA
10/03 – present	St. John's Health Center, Santa Monica, CA

Membership in Professional Societies

Society for Brain Mapping & Therapeutics

International Society for Magnetic Resonance in Medicine

Society for Neuroscience

Los Angeles County Medical Association

California Medical Association

American Medical Association

American Association for the Advancement of Science

North American Spine Society

American Association of Neurological Surgeons

Congress of Neurological Surgeons

Joint Section for Peripheral Nerve & Spine of the
AANS and CNS

Society of British Neurological Surgeons

Visiting Professorships

University of London
Atkinson Morley's Hospital
St. George's Hospital Medical School
Department of Neurosurgery
London, England, U.K. 10/21/97

Harvard University
Beth Israel/Deaconess Hospital
Harvard Medical School
Department of Anesthesia
Cambridge, Massachusetts 11/2/99 –11/3/99

Academic Honors and Awards

Pioneer in Medicine Award (2016) for invention of
Diffusion Tensor Imaging (DTI)
Society for Brain Mapping & Therapeutics

SMART Award. UK Department of Trade and Industry
Highly competitive national award in UK for
technology in SynGenix LTD (1997)

Wellcome Trust Clinical Fellowship
(5/94) Division of Clinical Neuroscience
& Division of Biochemistry
St. George's Hospital Medical School
University of London

Harrison Clinical Lecturer in Neuroscience
(1/91-5/92) Division of Clinical Neuroscience
St. George's Hospital Medical School
University of London

NIH PHS Musculo-Skeletal Training Grant
(2/81-2/84) Department of Biology,
Harvard University

Faculty Search Committee,
Department of Anthropology,
Harvard University (9/82-9/83)

Bachelors Degree with Honors, (1977)
University of Chicago

Howell Murray Award, (1977)
University of Chicago

Technical Course Certifications

Midas Rex Bone Dissection 4/93 - current

Oratec Intradiscal Electrothermal Therapy 12/98 - current

Academic Symposia

11/98 Fifth Workshop on Obstetric Brachial Plexus Lesions
Atrium MC, Heerlen, Netherlands

Editorial Appointments

7/08 – present Youmans Neurological Surgery
Section Editor – Peripheral Nerve

Peer Scientist Reviewer for Academic Journals

3/95 - present JMRI, (Journal of Magnetic Resonance Imaging)

9/04 – present Journal of Human Evolution, Harvard University

10/06 - present Neuroradiology

4/07 – present	Journal of Neuroimaging
6/09 – preset	NeuroImage
7/09 - present	Clinical Anatomy
4/10 – present	PLOS One
9/10 - present	Journal of Neurological Sciences
11/10 - present	Neurosurgery

University Committees

9/82 - 9/83	Faculty Search Committee, Department of Anthropology, Harvard University
2004	Examiner for Doctoral Thesis School of Medicine University of London

Consultant Appointments

11/97 – 11/98	General Electric Medical Systems IntraOperative MRI Medical Advisory Board
---------------	---

Business Positions

7/15 – present	Managing Partner Tensor Law, P.C. 2716 Ocean Park Blvd., #3082 Santa Monica, CA 90405 Phone: 310 450-9689 www.tensorlaw.com
11/93 – 3/04	Co-Chief Scientific Officer, Director, & Co-Founder SynGenix Ltd. (English Reg. # 2740120) Babraham Hall Babraham Cambridge, CB2 4AT, UK Phone: (011 44 1223) 496-093 Fax: (011 44 1223) 496-018

1/04 – present

CEO and Co-Founder, Director
Molecular Synthetics Inc.
2716 Ocean Park Blvd., Suite 3082
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Babraham, Cambridge, UK Office
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12/98 - present

CEO and Co-Founder, Director
NeuroGrafix, Inc.
2716 Ocean Park Blvd., Ste. 3035
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Phone: (310) 664-3944
Fax: (310) 664-3949
www.neurography.com

4/2008 – 10/2008

Host – The Pain Free Hour – CBS Radio/KLSX
with Kerri Kasem and Shirlee Jackson

Event Management

9/75 - 6/78

Chairman and Founder: Major Activities Board
University of Chicago
Booking, marketing and staging for concerts

9/77 - 4/78

Chairman: Festival of the Arts
University of Chicago
Booking, marketing, scheduling, advertising

9/73 - 9/74

International Vice President
United Synagogue Youth
Convention Planning, Budget Planning

9/73 - 4/74

Chairman: Conference on American Civilization
National Association of Student Councils
Booking, scheduling, supervision of committee staffs

Non-Technical Writing

9/75 - 6/77 *Chicago Maroon* (University of Chicago)
General reporting

6/77 - 10/79 *Chicago Reader*
Freelance feature writer

Technical Theater Experience

3/74 - 5/74 Stage Manager
Walt Whitman High School Talent Show

6/75 - 9/75 Technical Lighting and Construction Assistant
Court Theatre, Chicago

9/75 - 6/78 Technical Manager, Stage Manager, Director
University Theatre, University of Chicago

1/75 - 6/78 Technical Manager, Stage Manager, Director
Blackfriars, University of Chicago

Athletic Leadership

9/73 - 6/74 Co-Team Captain
Walt Whitman High School Track and Field Team

9/73 - 6/74 Varsity Letterman
Cross Country Team, Walt Whitman High School
Track and Field Team, Walt Whitman High School

11/10 - 6/11 Referee Coordinator
AYSO Pacific Palisades All Stars Soccer

Military Service

7/94 - 2/97 Commander
1466th Med. Detachment, Neurosurgery
and Major, Medical Corps
United States Army Reserve
Fort Lawton, Bldg. S-544
Seattle, WA 98199
Phone: 206 281-3081, Fax: 206 281-3499

3/97 - 08/01	Major, United States Army Reserve, Medical Corps Independent Ready Reserve
08/01 – 10/02	Lieutenant Colonel, United States Army Reserve, Medical Corps Independent Ready Reserve
10/02 – present	Lieutenant Colonel, United States Army Reserve, Medical Corps, Retired.

Publications

Published Articles

Filler AG, Bell BA. Axonal transport and nerve compression. *Brit. J. Neurosurg.* 6:(4) 293-295 (1992).
(PMID: 1382450)

Howe FA, Filler AG, Bell BA, Griffiths JR. Magnetic resonance neurography. *Magn. Reson. Med.* 28: 328-338 (1992).
(PMID: 1461131)

Filler AG, Howe FA, Hayes CE, Kliot M, Winn HR, Bell BA, Griffiths JR, Tsuruda JS. Magnetic resonance neurography. *Lancet* 341:659-661 (1993).
(PMID: 8095572)

Filler AG. Reverse transcriptase microassay. *Matrix Application Notes, Packard Instrument Company.* PAN0035/MAN-016:1-8 (1993).

Filler AG. Axonal transport and MRI: prospects for contrast agent development. *JMRI* 4:259-267 (1994).
(PMID: 7520308)

Howe FA, Saunders D, Filler AG, McLean MA, Heron C, Brown MM, Griffiths JR. Magnetic resonance neurography of the median nerve. *Brit. J. Radiol.* 67:1169-1172 (1994).
(PMID: 7874414)

Filler AG, Britton JA, Uttley D, Marsh HT. Adult post-repair myelo-meningocele & tethered cord syndrome: Good surgical outcome after abrupt neurological decline. *Brit. J. Neurosurg.* 9:659-666 (1995).
(PMID: 8561939)

Britz GW, Dailey AT, West GA, Kuntz C, Grant GA, Filler AG, Tsuruda JS, Goodkin R, Haynor DR, Maravilla K, Kliot M. Magnetic resonance imaging in the evaluation and treatment of peripheral nerve problems. *Perspectives in Neurosurgery* 6:53-66 (1995).

Dailey AT, Tsuruda JS, Goodkin R, Haynor DR, Filler AG, Hayes CE, Kliot M. Magnetic resonance neurography for cervical radiculopathy: a preliminary report. *Neurosurgery* 38:488-492 (1996).
(PMID: 8837800)

Filler AG, Kliot M, Hayes CE, Howe FA, Saunders DE, Bell BA, Winn HR, Griffiths JR, Tsuruda JS. Application of magnetic resonance neurography in the evaluation of patients with peripheral nerve pathology. *Journal of Neurosurgery* 85:299-309 (1996).
(PMID: 8755760)

Kuntz C, Blake L, Britz G, Filler A, Goodkin R, Tsuruda J, Hayes C, Maravilla K, Kliot M. Magnetic resonance neurography of peripheral nerve lesions in the lower extremity. *Neurosurgery* 39:750-757 (1996).
(PMID: 8880769)

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Filler AG. Diagnosis and management of pudendal neuralgia. American Association of Neurological Surgeons. 75th Annual Meeting. Washington, DC; April 17, 2007.

Filler AG, Lever AML. Molecular evidence for environmental trigger of mass evolutionary acceleration: An experimental model for the Cambrian explosion. American Association for the Advancement of Science, 88th Annual, Pacific Regional Meeting, Boise, Idaho. June 19, 2007.

Filler AG. A Humanian Model of Human Evolution: Evidence that habitual upright bipedality is a synapomorphy that defines a hominiform clade of hominoids including humans and all extant apes. American Association of Physical Anthropology, 77th Annual Meeting, Columbus, Ohio April 10, 2008. AJPA 135 (S46): p.96

Filler AG. Impact of Cycle Time in Minimal Access Nerve Surgery and Interventional MRI. International Brain Mapping & Intraoperative Surgical Planning Society – World Congress. 5th Annual Meeting. Los Angeles. August 26, 2008.

Filler AG. The anti-symmetric dyadic tensor model, the arctangent tractographic function and their role in the past & intra-operative future of diffusion tensor imaging. International Brain Mapping & Intraoperative Surgical Planning Society – World Congress. 6th Annual Meeting. Harvard Medical School, Boston, MA. August 29, 2009.

Filler AG. Fractional anisotropy and DTI tractography enhance nerve identification in MR Neurography of the lumbo-sacral plexus. Joint Section for Disorders of Spine and Peripheral Nerve, AANS/CNS, 26th Annual Meeting, Orlando, FL, February 18, 2010.

Filler AG. Fractional anisotropy and DTI tractography enhance nerve identification in MR Neurography of the brachial plexus. 2010 Annual Meeting, American Association of Neurological Surgeons, Philadelphia, PA, May 1-5, 2010.

Filler AG. Integration of High Field DTI Data with Real Time Intraoperative Low Field MRI for Millimeter Scale Guidance – When is High Field DTI Guidance Contra-Indicated? International Brain Mapping & Intraoperative Surgical Planning Society – World Congress. 7th Annual Meeting. Uniformed Services University of the Health Sciences, Bethesda, MD. May 24, 2010.

Filler AG. High Field DTI Data in the Setting of Real Time Intraoperative Low Field MRI for Millimeter Scale Guidance – Effects of Mechanical Tissue Distortion by Surgical Instruments. 8th International Interventional MRI Symposium. Leipzig, Germany, Sept. 24-25, 2010.

Filler AG. Interventional MRI Percutaneous Procedures for Extended Relief and Cure of Thoracic Outlet Syndrome. International Brain Mapping & Intraoperative Surgical Planning Society – World Congress. 8th Annual Meeting. UCSF, San Francisco, CA. June 8-10, 2011.

Filler AG. Interventional MRI Percutaneous Procedures for Extended Relief and Cure of Thoracic Outlet Syndrome. Congress of Neurological Surgeons, Washington Convention Center, Washington, DC October 1-6, 2011.

Filler AG. Real time Open MRI Guidance for Percutaneous Nerve Decompression. Society for Brain Mapping & Therapeutics, 10th Annual World Congress. Baltimore Convention Center, Baltimore, MD. May 12-14, 2013.

Presentations and Invited Lectures

Filler AG. Axial Function in Terrestrial Amniotes. The Amniote Seminar. Museum of Comparative Zoology, Romer Library, Harvard University, 10/7/80.

Filler AG. Bipedal Apes Before the Dawn of Man. Presented at the Darwin Festival (on Darwin's Birthday), Dept. of Biology, The Biology Society, Salem State College, Salem, Mass. 2/12/82.

Filler AG. Evolutionary origins of the human upright spine. Presented at 5th annual meeting, Joint Section for Peripheral Nerve and Spine, AANS/CNS, 2/12/89.

Filler AG. Imaging of Axonal Transport. Grand Rounds. Department of Neurological Surgery, University of Washington Medical Center, Seattle, WA, 12/15/89.

Filler AG. Progress in the design of axonally transported intraneural contrast agents for peripheral nerve imaging with MRI. Royal Post-Graduate Medical School, NMR Unit, Hammersmith Hospital, London, UK. 9/24/90.

Filler AG. Mathematical analysis of multiple diffusion gradients for neuronal tract tracing. Resident Research Rounds, Harborview Medical Center, Dept. of Neurol. Surg., University of Washington, Seattle, WA, 8/7/91

Filler AG. Sir Richard Owen, Sir Arthur Keith, and the lost styloid process: Serial homology and the evolution of the human spine. Section of Neurology, Royal Society of Medicine, Registrar's Meeting, London, February 6th, (1992)

Filler AG. Spinel Ferrites and Superparamagnetism in MR Imaging. Division of Biochemistry, Department of Cell & Molecular Biology, St. George's Hospital Medical School, London, 3/15/92.

Magnetism, Spinels, and the Design of Tracers for In Vivo Imaging of Axoplasmic Flow. Neuroscience Seminar, Department of Neurological Surgery, University of Washington, Seattle, 7/25/92.

Filler AG. Diffusion Anisotropy in Magnetic Resonance: Neurography and In Vivo Neural Tract Imaging. Neuroscience Seminar, Department of Neurological Surgery, University of Washington, Seattle, 12/30/92.

Filler AG. Axonal Transport of MR Contrast Agents. Nycomed Imaging, Oslo, Norway, 4/10/93.

Filler AG. MR Neurography in Clinical Medicine. Department of Neurology and Neurosurgery, Columbia University Neurologic Institute, New York, New York, 8/12/93

Filler AG. Evolution of the Axial Skeleton in the Hominoid Apes and Man. Department of Orthopedics, Harborview Medical Center, Seattle, WA, 10/16/93

Filler AG. MR Neurography for Peripheral Nerve Diagnosis. Department of Orthopedics, Harborview Medical Center, Seattle, WA, 1/19/94

Filler AG. Diffusion Anisotropy and Axonal Transport in MR Imaging of Neural Structures. Neurology Study Unit, Seattle, WA, 2/8/94

Filler AG. Diffusion Anisotropy and MR Neurography. Department of Radiology, Addenbrooke's Hospital, Cambridge University, Cambridge, U.K., 11/17/94.

Filler AG. MR Neurography: Clinical Prospects. Presented at meeting of the South of England Neurosciences Association, London, 5/19/95.

Filler AG. Diffusion Anisotropy, Axonal Transport and Endoneurial Fluid in Clinical Magnetic Resonance Neurography. Section of Neurosurgery, Yale University, New Haven, CT, 12/20/95.

Filler AG. New Techniques in MR Imaging: MR Neurography. The role of MRI neurography in imaging of the brachial plexus. Medical Imaging Center of Southern California, Santa Monica, CA, 7/1/96.

Filler AG. Interpretation of MR Neurograms. Long Beach Memorial MRI Center. 11/11/96.

Filler AG. Diffusion Imaging and T2 Neurography in MR Diagnosis of Peripheral Nerve Pathology. UCLA Department of Neurology Outpatient Conference. 11/20/96.

Filler AG, Johnson JP, Farahani K, Lufkin RB. Neurography of the lumbar and sacral spinal nerves. Federation of Spine Associations, American Academy of Orthopaedic Surgeons, February 16, 1997, San Francisco, CA (1997).

Filler AG. Case Presentation: MR Neurography in the Diagnosis of Thoracic Outlet Syndrome in a Patient with Bilateral Hand Pain. Chairman's conference, UCLA Department of Neurology, 3/97.

Filler AG. The Role of Black Blood Contrast Agents and Intraneural Contrast Agents in Magnetic Resonance Neurography. Nycomed Torsten Almen Research Center (TARC), Wayne PA., 6/24/97.

Filler AG. Black Blood Contrast Agents and Intraneural Contrast Agents in Magnetic Resonance Neurography. Nycomed Imaging, Oslo, Norway. 10/14/97.

Filler AG. MR Neurography and Open MRI in the Diagnosis and Management of Extremity Pain. Atkinson Morley's Hospital, London, England, U.K. 10/21/97.

Filler AG. MR Neurography and Interventional MRI in the Diagnosis and Management of Spine and Peripheral Nerve Disorders. General Electric Medical Systems, IntraOperative MRI Medical Advisory Board. Chicago, IL 11/10/97.

Filler AG. MR Neurography for the Evaluation of Nerve Tumors and the Effects of Cancer on Nerves. UCLA Advances in Neurosurgery. 11/15/97.

Filler AG. Progress in the Use of MRI for Management of Peripheral Nerve Disorders. Department of Radiology, UCLA Medical Center. 5/1/98.

Filler AG. Magnetic Resonance Neurography: Application to the Study of Peripheral Nerve Pathology. American Association of Electrodiagnostic Medicine. Orlando, FL. 10/14/98.

Filler AG. MR Neurography and interventional MRI in the diagnosis of sciatica. Department of Surgery Grand Rounds, UCLA Medical Center, 11/18/98.

Filler AG. Imaging of peripheral nerve tumors. Symposium on Peripheral Nerve Tumors. 15th Annual Meeting. Joint Section on Disorders of the Spine and Peripheral Nerves of the AANS/CNS. Orlando, FL 2/11/99.

Filler AG. Open MRI in the management of spine and peripheral nerve pathology. UCLA iMR Program Presentation. Los Angeles, CA 2/17/99.

Filler AG. Imaging of brachial plexus lesions. XIIth Symposium on Brachial Plexus Surgery (A. Narakas Club). Barcelona, Spain 3/14/99.

Filler AG. Magnetic Resonance Neurography for improved preoperative evaluation of brachial plexus disorders. Brachial Plexus Symposium, Obstetrical and Adult. American Association of Hand Surgery & International Society for Reconstructive Microsurgery. Los Angeles, CA 6/22/99.

Filler AG. MR Neurography and open MRI in the management of spine and extremity pain. Grand Rounds, Department of Orthopedics, UCLA Medical Center, Los Angeles, CA 10/9/99.

Filler AG. MR Neurography and Open MRI in the Management of Spine and Extremity Pain. Visiting Professor, Department of Anesthesia, Beth Israel/Deaconess Hospital, Boston, MA 11/3/99.

Filler AG. Diffusion Anisotropy, CNS Tract Tracing and MR Neurography. Research Meeting of Professor John Mazziotta's Brain Mapping Group, December 8, 1999.

Filler AG. Nerve imaging. AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves, Annual Meeting, Indian Wells, CA 2/24/00.

Filler AG. Evolution of the human spine. UCLA Comprehensive Spine Program, Joint Spine Conference, Los Angeles, CA 3/00.

Filler AG. MR Neurography & Open MRI for diagnosis and treatment of spine and peripheral nerve pathology. American Association of Neurological Surgeons, Annual Meeting, San Francisco, CA, 4/12/00.

Filler AG. Neurography for peripheral nerve diagnosis. Department of Neurology Grand Rounds, West Los Angeles Veterans Administration Medical Center. Los Angeles, CA 4/21/00.

Filler AG. MR Neurography, open MRI, and axonally delivered therapy. Millenium Sir Wylie McKissock Neuroscience Lecture. Atkinson Morley's Hospital, Wimbledon, UK. 11/24/2000.

Filler AG. Outcome study of diagnosis and treatment for sciatic of non-disk origin. UCLA Comprehensive Spine Center, UCLA, Los Angeles, CA 3/5/01.

Filler AG. Advances in the diagnosis and treatment of nerve disorders. Department of Surgery Grand Rounds, UCLA, Los Angeles, CA. 4/4/01.

Filler AG. MR Neurography in the diagnosis and treatment of thoracic outlet syndromes. Medical staff grand rounds, Los Robles Regional Medical Center, Thousand Oaks, CA, 5/4/01.

Filler AG. Advances in the diagnosis and treatment of nerve disorders. Medical Center Grand Rounds, Daniel Freeman Memorial Hospital, Los Angeles, CA 6/4/01.

Filler AG. Advances in the diagnosis and treatment of nerve disorders. UCLA Department of Surgery Third Year Medical Student Lecture Series, UCLA Medical Center, Los Angeles, CA 6/8/01.

Filler AG. MR Neurography for diagnosis of spine and peripheral nerve disorders. Institute for Spinal Disorders, Cedars Sinai Medical Center, Los Angeles, CA 8/16/01.

Filler AG. MR Neurography, Open MRI and Axonal Transport in Advanced Diagnosis and Treatment of Nerve Disorders. Grand Rounds, Department of Neurosurgery, Massachusetts General Hospital, Harvard University, Boston, MA, November 1, 2001.

Filler AG. Image diagnosis and surgical neurolysis for neurogenic thoracic outlet syndrome. Symposium on Advances in Vascular Surgery, Chicago, IL, December, 2001.

Filler AG. MR Neurography for the diagnosis of peripheral nerve disorders. Panel Discussion: Innovations in Peripheral Nerve Surgery, American Society for Peripheral Nerve, Cancun, Mexico, January 2002.

Filler AG. Failed lumbar spine surgery & sciatica of non-disk origin: Diagnosis, treatment & outcomes. Grand Rounds, Los Robles Regional Medical Center, Thousand Oaks, CA, June 21, 2002.

Filler AG. Image diagnosis and neuroplasty for neurogenic thoracic outlet syndrome. Dept. of Vascular Surgery Grand Rounds, Cedars Sinai Medical Center, Los Angeles, CA July, 2002.

Filler AG. Chaos and the evolutionary emergence of the human spinal design. Systems Biology Seminar, Santa Monica, CA August, 2002.

Filler AG. MSD Review of Potential for Neurography in Surgical Image Guidance. Philadelphia, PA, September 24, 2002.

Filler AG. MR Neurography and Open MRI in the Diagnosis and Treatment of Disorders Affecting the Spine and Nerves. Grand Rounds, Department of Neurosurgery, University of California Irvine, Orange, CA, April 22, 2003.

Filler AG. Intraneural Drug Delivery via Axonally Transported Molecular Carriers: Novel Pharmaceutical Designs for Intractable Pain Problems. Discovery Research Seminar. Purdue Pharma, Cranbury, New Jersey, September 12, 2003.

Filler AG. MR Neurography and Open MRI for Diagnosis and Treatment of Spine and Nerve Disorders. CME Spine Conference, Institute for Spinal Disorders, Cedars Sinai Medical Center, Los Angeles, CA, December 3, 2003.

Filler AG. Thoracic Outlet Syndrome Does Exist. Controversies in Peripheral Nerve. Joint Section on Spine and Peripheral Nerve AANS/CNS, San Diego, CA, March 20, 2004.

Filler AG. MR Neurography and Open MRI Guided Procedures for Diagnosis and Treatment of Nerve Disorders. Grand Rounds, University of California at San Diego, San Diego, CA, January 13, 2005.

Filler AG. New Developments in Nerve Imaging. Course 202. American Society for Peripheral Nerve, 14th Annual Meeting, Fajardo, Puerto Rico. January 16, 2005.

Filler AG. Diagnosis and Treatment of Sciatica from Piriformis Syndrome: The Impact of New Methods on 'Spine-Related' Peripheral Nerve Symptoms. Current Concepts in Spinal Disorders: Clinical Symposia Series, Cedars Sinai Institute for Spinal Disorders, February 9, 2005.

Filler AG. MR Neurography and Open MRI Guided Procedures for Diagnosis and Treatment of Nerve Disorders. San Diego Neurological Society, San Diego, CA, February 17, 2005.

Filler AG. Open MR Guided Injections in Spine, Nerve and Neuromuscular Disorders. American Society for Spine Radiology, Isla Verdes, Puerto Rico February 24, 2005.

Filler AG. MR Neurography and Open MRI Guided Procedures for Diagnosis and Treatment of Nerve Disorders. AANS Section on Peripheral Nerve, Special Symposium, New Orleans, LA 4-19-05 (2005).

Filler AG. MR Neurography and Open MRI Guided Procedures for Diagnosis and Treatment of Nerve Disorders. San Diego Academy of Neurological Surgery, San Diego, CA 5-25-05. (2005)

Filler AG. Evolution and Comparative Anatomy of Vertebrae in Reptiles and Mammals and the Emergence of Upright Posture in the Apes and Early Ancestors of Humans. Visiting Professor. Cedars Sinai Medical Center, Los Angeles, CA 6-1-05 (2005)

Filler AG. MR Neurography, Open MR Injections & Minimal Access Surgery in the Management of Thoracic Outlet Syndrome. Department of Neurosurgery Grand Rounds, University of California at Irvine, Orange, CA 8-3-05 (2005)

Filler AG. Nerve Imaging Techniques. American Society for Peripheral Nerve, Tucson, Arizona, 1-16-06 (2006)

Filler AG. New Advanced Imaging Techniques In the Diagnosis of Pain Syndromes – Update Session 402: Sciatica of Non-Disc Origin and Piriformis

Syndrome. American Academy of Pain Medicine – Annual Meeting, San Diego, CA 2-25-06 (2006)

Filler AG. How to read an MR Neurography Image. Joint Section for Disorders of Spine and Peripheral Nerve, AANS/CNS, 22nd Annual Meeting, Orlando, Florida, 3-17-06 (2006)

Filler AG. Diagnosis and treatment of sciatica of non-disc origin and piriformis syndrome. In: Controversies in Peripheral Nerve Surgery: Piriformis syndrome – Is it real? American Association for Neurological Surgery, Annual Meeting, San Francisco, CA, 4-26-06, (2006)

Filler AG. MR Neurography, Open MR intervention, minimal access operations and physical exam for brachial and lumbo-sacral plexus disorders. Cedars Sinai Medical Center Neurosurgery Residents Lecture. Cedars Sinai Medical Center, Los Angeles, CA 1-26-07 (2007)

Filler AG. Advances in MR Neurography. ABCs of Peripheral Nerve Course, Joint Section for Disorders of Spine and Peripheral Nerve, AANS/CNS, 23rd Annual Meeting, Phoenix, Arizona 3-9-07, (2007)

Filler AG. MR Neurography – Assessment of the first 5,000 cases. The Kline Festschrift – an International Symposium on Nerve. LSU Health Sciences Center, New Orleans, Louisiana. 10-19-07. (2007)

Filler AG. Minimal access surgery for pelvic nerve entrapments and thoracic outlet syndrome. The Kline Festschrift – an International Symposium on Nerve. LSU Health Sciences Center, New Orleans, Louisiana. 10-20-07 (2007)

Filler AG. Diagnostic distinction – lumbo-sacral radiculopathy vs sciatica of non-disc origin: When to consider piriformis syndrome. Cedars Sinai Medical Center, Institute for Spinal Disorders, Clinical Symposium, Los Angeles, CA 2-13-08 (2008)

Filler AG. Piriformis Syndrome: Real or Not – David Cahill Memorial Controversies Session, Joint Section for Spine and Peripheral Nerve of AANS and CNS. Orlando, FL 3-1-08 (2008).

Filler AG. The Humanian Theory of Human Evolution. Evidence fore early homeotic origin of an upright bipedal hominiform lineage. Los Angeles, MENSA Society. Woodland Hills, CA 2-13-09 (2009).

Filler AG. MR Neurography, open MR guided injections, and minimal access surgery in the management of peripheral nerve disorders. Grand Rounds – University of California at Irvine, Department of Neurosurgery. Irvine, CA 10-14-09 (2009)

Filler AG. The Role of MRI in Diagnosis of Traumatic Lesions and Entrapment Syndromes. American Society for Peripheral Nerve. 2010 Annual Meeting, Boca Raton, FL 1-10-10 (2010).

Filler AG. A historical hypothesis: The first recorded neurosurgical operation: Isis, Osiris, Thoth & the Origin of the Djed Cross. 2nd Chongqing International Clinical Neuroscience Forum & International NeuroDrug Conference, Chongqing, People's Republic of China, 3-20-10, (2010).

Filler AG. Tri-partite complex for axonal transport drug delivery – Development & demonstration of clinical efficacy. 2nd Chongqing International Clinical Neuroscience Forum & International NeuroDrug Conference, Chongqing, People's Republic of China, 3-20-10, (2010).

Filler AG. Diffusion tensor imaging (DTI) & Magnetic Resonance Neurography (MRN): Origins, History & Clinical Impact. 2nd Chongqing International Clinical Neuroscience Forum & International NeuroDrug Conference, Chongqing, People's Republic of China, 3-20-10, (2010).

Filler AG. Diffusion Tensor Imaging (DTI) & Magnetic Resonance Neurography (MRN): Origins, History, Physical Basis & Clinical Impact. NeuroTalk BIT 1st Annual Congress, Singapore. June 25, 2010.

Filler AG. MRI Neurography, Open MRI Surgery in the Peripheral Nerve Setting & Minimal Access Proximal Plexus Surgery. Association of Extremity Nerve Surgeons. Annual Meeting 2011, Las Vegas Nevada, November 2011

Filler AG. Neuroimaging – MR Neurography, Diffusion Tensor Imaging, and Open MRI for Nerve and Neural Tract Imaging. American Society for Peripheral Nerve – Annual Meeting 2012, Las Vegas, Nevada, January 2012

Filler AG. Diffusion Tensor Imaging, MR Neurography and High Resolution Axonal MRI Techniques for Mapping the Human Connectome & Peripheral Nervous System. International Neuroscience Conference – Omori Medical Center, Toho University, Tokyo, Japan, March 2012

Filler AG. Diffusion Tensor Imaging, MR Neurography and High Resolution Axonal MRI Techniques for Mapping the Human Connectome & Peripheral Nervous System. 周围神经 - 核磁共振成像 - 扩散张量成像技术 International Neuroscience Conference – 2012 Shanghai International Forum on Neuroscience. 8th People's Hospital, Shanghai, Peoples' Republic of China, May 2012

Filler AG. Diffusion Tensor Imaging, MR Neurography and High Resolution Axonal MRI Techniques for Mapping the Human Connectome & Peripheral Nervous System. 周围神经 - 核磁共振成像 - 扩散张量成像技术

International Neuroscience Conference – 3rd Annual World Congress of NeuroTalk, Beijing, People’s Republic of China, May 2012

Filler AG. Advances in Diffusion Anisotropy Imaging – New Mathematical Models: The Anti-symmetric Dyadic Tensor Model. Society for Brain Mapping & Therapeutics, 10th Annual World Congress. Baltimore Convention Center, Baltimore, MD. May 12-14, 2013.

Filler AG. Medical and Legal Aspects of Coding and Billing for Peripheral Nerve Surgery. American Society for Peripheral Nerve, Maui, Hawaii, January 12, 2014

Filler AG. Ultrasound and MRI in Nerve Injury. American Society for Peripheral Nerve, Paradise Island, Bahamas, January 24, 2015.

Filler AG. Open MRI Guided Percutaneous Nerve Treatments. Society for Brain Mapping and Therapeutics, Los Angeles Convention Center, Los Angeles, California, March 7, 2015.

Filler AG. Role of the G20+/N20+ Brain Mapping Initiative in the Future of Clinical Neuroscience – Invention and Innovation. Joint Session, Australian Parliament, Canberra, Australia, October 10, 2015

Filler AG. Welcoming Address Society of Brain Mapping 13th Annual Meeting – The Role of Technological Advance and Multi-Disciplinary Collaboration in the Future of Neuroscience. Miami, Florida, April 8, 2016.

Filler AG. Policy, Ethics and the Law: The Role of Daubert/Frye and Markman Type Evidentiary Hearings in the Application Neuroscience in the Courtroom. Society of Brain Mapping & Therapeutics, Miami, Florida, April 8, 2016.

Filler AG. From the Laboratory to the Technology Start-Up: Invention, Patents, and Entrepreneurship. Society of Brain Mapping & Therapeutics, Miami, Florida, April 9, 2016.

Filler AG. Role of the G20+/N20+ Brain Mapping Initiative in the Future of Clinical Neuroscience – Invention and Innovation. United States Congress, Brain Mapping Day, April 20, 2016.

Filler AG. Response to Michel Kliot – Diffusion Tensor Methods and Neurography for Imaging in Peripheral Nerve Management. American Association of Neurological Surgeons, Chicago, IL, May 3, 2016.

Filler AG. Role of the Society for Brain Mapping in the Future of Clinical Neuroscience – Invention & Innovation –通过N20 推进神经科学创新 - N20 Joint Meeting with Chongqing International Neuroscience Forum. Chongqing, People’s Republic of China, September 3, 2016.

Filler AG. Diffusion Tensor Imaging & MR Neurography & High Resolution Axonal MRI Techniques for the Evaluation of Peripheral Nerve Entrapments. American Society for Peripheral Nerve, 2017 Annual Meeting, Kona Hawaii, January 13, 2017.

Filler AG. Methodology for Analysis of DTI Images in the Setting of Brain Injury with Memory Loss. Society for Brain Mapping and Therapeutics, 14th Annual Meeting, Los Angeles, CA; April 20, 2017

Filler AG. Surgical Treatment of Peripheral Pain: Lower Extremity Nerve Entrapments. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL; March 14, 2018.

Filler AG. Methodology for Analysis of DTI Images in the Setting of Brain Injury with Photophobia or Vertigo. Society for Brain Mapping and Therapeutics, 15th Annual Meeting, Los Angeles, CA; April 14, 2018

Books

Filler AG. *Apple Thesaurus* (technical text on Apple II microelectronics, lab interfaces, and machine level programming). Datamost, Chatsworth, California. pp. 893. (1984). For information on the book:
<http://www.amazon.com/Apple-Thesaurus-Aaron-Filler/dp/0881903469>

Filler AG. *Do You Really Need Back Surgery: A Surgeon's Guide to Neck and Back Pain and How to Choose Your Treatment*. Oxford University Press. pp 352.(2004).
<http://www.amazon.com/You-Really-Need-Back-Surgery/dp/019532708X>
Hardcover 1st Edition May 2004
Paperback Edition May 2007
Paperback 2nd Edition January 2013

Filler AG. *The Upright Ape: A New Origin of the Species*. New Page Books, New Jersey, July 2007.
<http://www.amazon.com/Upright-Ape-New-Origin-Species/dp/1564149331>

Filler AG. *Axial Character Seriation in Mammals: An Historical and Morphological Exploration of the Origin, Development, Use, and Current Collapse of the Homology Paradigm*. Brown Walker Press, Boca Raton, FL, April 2007.
<http://www.amazon.com/Axial-Character-Seriation-Mammals-Morphological/dp/1599424177>

Filler AG. Smart Guide to Patents – SmartGuide Publications (September 2012)
<http://www.amazon.com/Smart-Guide-Patents-Aaron-Filler/dp/098344210X>

Filler AG. Guide to Back Pain, Neck Pain and Nerve Disorders – Smart Guide Series (in prep)

Filler AG. Guide to Medical Imaging for Patients – Smart Guide Series (in prep)

Theses

Filler, AG. *Brain Size and Social Behavior in East African Bovids: Application of Multivariate Statistics, Eigenvectors and Factor Analysis to Relate Behavioral and Morphometric Data*. (BA, University of Chicago) (1977) (Human Behavior & Institutions)

Filler, AG. *Factor analysis and multivariate statistics for the evaluation of cranial morphometrics in Macropodids*. (Medical Student research project (1978) University of Chicago.

Filler AG. *Functional and Evolutionary Perspectives on Axial Anatomy in Hominoids*. (MA, University of Chicago) (1979).

Filler AG. *Axial Character Seriation in Mammals: An Historical and Morphological Exploration of the Origin, Development, Use, and Current Collapse of the Homology Paradigm*. (PhD, Harvard University) (1986).

Blog Posts

- 1/29/2007 *Oxford University Press Blog*
Is there an ethical crisis in spinal surgery?
http://blog.oup.com/2007/01/is_there_an_eth/
- 12/15/2007 *Anthropology.net*
A human ancestor for the apes? – Morotopithecus & Homo sapiens vertebrae
<http://anthropology.net/2007/12/15/a-human-ancestor-for-the-apes/morotopithecus-homo-sapiens-vertebrae/>
- 12/24/2007 *Oxford University Press Blog*
Redefining the word “Human” – Do some apes have human ancestors?
<http://blog.oup.com/2007/12/human/>
- 8/17/2009 *Research Blogging*
Diagonal postures & The descent from human to ape
<http://www.researchblogging.org/blogger/home/id/1142>

Major Media Coverage of Academic Work

Print

3/16/93	<i>New York Times</i> - Magnetic Resonance Gives Better Images of Nerves in the Body. Warren Leary.
3/12/93	<i>LA Times</i> - Nerve Imaging Could Revolutionize Treatment of Pain. Thomas Maugh.
3/12/93	<i>London Times</i> - 3D images improve cancer treatment. Nigel Hawkes.
3/21/93	<i>Die Welt</i> - NMR-Tomographie spürt Nervenstränge auf. Werner Schulz.
3/12/93	<i>Associated Press</i> - New method lets doctors see nerves more clearly.
3/20/93	<i>Science News</i> - Seeing the nerves within us
9/28/96	<i>Science News</i> - Imaging method really shows some nerve
7/31/96	<i>LA Times</i> - Report touts new nerve imaging technique. Thomas Maugh.
9/7/96	<i>Lancet News</i> - MRI simplifies diagnosis of peripheral nerve lesions.
3/2001	<i>Discover</i> - Pulling pain up by the roots. Paul D. Thacker page 11.
3/24/01	<i>The Economist</i> - Magic bullet for pain-killers. Technology Quarterly, page 20

Internet

4/18/1997	<i>CNN.com</i> Enhanced MRI reveals nerves that cause pain http://cnn.com/HEALTH/9704/18/nfm/pain/index.html
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- 11/8/2000 *BBC News*
A Step Forward in Killing Pain
http://news.bbc.co.uk/hi/english/health/newsid_1011000/1011780.stm
- 11/8/2000 *Web MD*
New Techniques Get at Pain Where It Hurts: Nerves Carry
Pain Medication Directly To Its Target
<http://my.webmd.com/content/article/1728.63588>
- 11/8/2000 *CBS Healthwatch*
New Drug Delivery Method May Target Pain Directly
<http://cbshealthwatch.medscape.com/medscape/p/gcommunity/HNews/hnews.asp?RecID=226860&Channel=0>
- 11/8/2000 *Reuters Health*
Axonal Transport System Targets Drug to Site of Neuropathic
Pain in Rat Model
<http://www.reutershealth.com/archive/2000/11/08/professional/links/20001108scie002.html>
- 11/8/2000 *New Scientist:*
Magic Bullet
<http://www.newscientist.com/dailynews/news.jsp?id=ns9999156>
- 11/8/2000 *Associated Press*
<http://wire.ap.org/APnews/?SITE=JRC&FRONTID=HOME>
- 11/8/2000 *Wired News*
Pain Relief's New Delivery System
<http://www.wirednews.com/news/technology/0,1282,40125,00.html>
- 1/31/2005 *Forbes.com*
New Clues for Sciatica Pain Relief
<http://news.healingwell.com/index.php?p=news1&id=523726>
- 7/15/2007 *Reuters*
Blame that bad back on your ancestors
<http://uk.reuters.com/article/idUKN1427159120070715>
- 10/10/2007 *MSNBC*
Human ancestors walked upright, study claims
<http://www.msnbc.msn.com/id/21223189/wid/11915829/>
- 5/20/2011 *Reuters Legal News*
Revenge of the Patent Holders
<http://newsandinsight.thomsonreuters.com/Legal/NY/News/ViewNews.aspx?id=16798&terms=%40ReutersTopicCodes+CONTAINS+>
- 10/7/2019 *Bloomberg Law*

Federal Circuit Reinstates Brainlab MRI Patent Dispute
<https://news.bloomberglaw.com/health-law-and-business/fed-cir-reinstates-brainlab-mri-software-patent-dispute>

- 10/7/2019 *Law 360*
Federal Circuit Reverses Brainlab MRI Patent Win
<https://www.law360.com/articles/1206835/fed-circ-reverses-brainlab-mri-patent-win>
- 10/24/2019 *Patent Docs*
NeuroGrafix v. Brainlab, Inc (Fed. Cir. 2019)
<https://www.patentdocs.org/2019/10/neurografix-v-brainlab-inc-fed-cir-2019.html>
- 11/26/2019 *Lexology*
No Brainer: Summary Judgment Based on Non-Asserted Grounds Procedurally Improper
<https://www.lexology.com/library/detail.aspx?g=0c98741c-f586-43e8-a65f-99bddbfa0589>
- 10/24/2019 *Patent Docs*
NeuroGrafix v. Brainlab, Inc (Fed. Cir. 2019)
<https://www.patentdocs.org/2019/10/neurografix-v-brainlab-inc-fed-cir-2019.html>

Television

- 3/12/93 *CNN Headline News*
- 11/8/96 *ABC World News Tonight with Peter Jennings*
http://www.aaronfiller.com/Video/AGF_Movie.html
- 4/18/97 *CNN Headline News*
http://www.aaronfiller.com/Video/AGF_Movie.html
- 3/1/05 *Fox 11 News*
- 7/31/05 *Ivanhoe Science Productions*
<http://www.ivanhoe.com/science/story/2005/07/31a.html>
- 11/3/2017 *Megyn Kelly - NBC*
Is Harvey Weinstein About to Be Arrested

<https://www.today.com/video/is-harvey-weinstein-about-to-be-arrested-1091195971711>

11/7/2017

Tucker Carlson - Fox News

Will Weinstein Case Go to a Grand Jury

<https://www.youtube.com/watch?v=AB9-xAwOUT4>

(at 33:20 of 44:14)



®America's Leader in the Diagnosis & Treatment of Traumatic Brain Injury

*Aaron Filler, MD, Ph.D., J.D.
2716 Ocean Park Blvd, Suite 3082
Santa Monica, CA 90405*

*(310) 314-6410
Fax (310) 314-2414*

Professional and Legal Fee Schedule for Aaron G. Filler, MD, Ph.D., J.D.

This is the fee schedule for expert witness and professional fees for service performed by Aaron G. Filler, MD, Ph.D., Director of the Institute for Nerve Medicine. Dr. Filler is board certified in Neurosurgery by the American Board of Neurological Surgery and also by the Board in Surgical Neurology of the Royal Colleges of Surgeons of England, Edinburgh, Glasgow, and Ireland. He has a MD from the University of Chicago and Ph.D. from Harvard University. He has staff privileges at Cedars Sinai, and St. John's Health Center where he performs clinical work. Dr. Filler is director of the Peripheral Nerve Program and director of the Spinal Disorders Program at the Institute for Nerve Medicine. The available fees for services are:

Medical record review, radiological studies, medical report preparation,
phone consultation hourly rate ***Rush is completion in 1 week, or less at \$2,000.00)** \$1,000.00

Independent Medical and Medical Examinations (with limited medical records) \$675.00

***Note- **\$6,000.00** charge applies to no call/no show fees for all IME's

*Deposition testimony hourly rate (2 hours minimum charge applies) \$1,500.00

***Trial testimony *or binding arbitration testimony per half day** (only in CA) \$7,500.00

*Trial testimony or **binding arbitration Full day – and all out of state testimony** \$15,000.00

*Travel for expert witness services hourly rate \$1,000.00 via airplane

*this does not include airfare, hotel stays etc. \$1,500.00 via private car

*Retainer fee for large cases (records over 9 hours, DTI, MRN requests etc.) \$20,000.00

*****Review for merit requests:** the minimum fee is **\$2,500.00 non-refundable** plus any additional reports, references, exhibits, and lengthy medical records will be charged hourly.

Separately submitted supplemental records for review will be billed for medical record review. Miscellaneous expenses will be charged directly, such as, transcription services, specialized computer software, text or reference books obtained specifically for a given case, and any special media orders (overhead layouts, expanded picture blow-ups, etc.) Estimated expenses arising from airfares (business or first class seats), hotel fees, rental car and parking fees must be paid in advance or included in a retainer. *Cancellations must be made 48 hours advance of the scheduled occurrence or the minimum fee will be applied. *****We follow a strict NO REFUNDS policy without exception.**

***All arbitration testimony and all trial testimony must be requested AT LEAST 30 days in advance of testimony, regardless of any prior issued or predicted trial commencement date.



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Please respond in writing within 5 days if this fee schedule is not acceptable. After accepting the terms of this schedule, ***we adhere to the Code of Civil Procedure Section 2034, which specifies you will provide a copy of these fees to opposing counsel in your declaration.*** Furthermore, deposing counsel will be responsible for all time spent at the deposition, any additional time for counsel who is declaring Dr. Filler, as their expert shall pay deposition transcription review.

To schedule all consultations and depositions, contact me at (310) 314-6410. All correspondence, medical records and advanced fee retainer checks for Dr. Filler should be **sent to the address on this letterhead.** All signed original reports will be sent as soon as we receive payment, or an arrangement has been made in advance. **All charges are due upon scheduling, and payments for trial or deposition testimony are due in advance of scheduled testimony.**
***Any late payments (beyond date of service) are subjected to a 20% (of total balance due) penalty, no exceptions.**

Sincerely,

Approval Signature,

Jodean Petersen, CSO

_____ Date _____

EXHIBIT B

INITIAL COMPREHENSIVE EVALUATION VIA PHONE

Patient Name: Haysbert, JoAnn

Date of Birth: 09/22/1948

MR#: HJ50647

Date of Injury: 5/23/2018

Date of Service: 09/18/20

MECHANISM OF INJURY: Fall / Blow to the head

HISTORY OF PRESENT ILLNESS: The patient was with her daughter in the car going to dinner. They arrived at the Outback Steakhouse. The patient asked the hostess where the restrooms were. The hostess pointed in the direction of the restrooms. The patient took 1-2 steps forward towards the restroom, all of a sudden, she fell on her left side due to the slippery floor. Her head slammed on the slippery floor. She lost consciousness for a few seconds. When she regained consciousness, she saw people around her. She was unable to move. She was picked up by three people. She was confused and disoriented. The patient did not know where she was. The patient started experiencing immediate pain in her left temple and her head was spinning. She was dizzy and off balance. She had swelling and bruising of her left temple. She also had left wrist/shoulder pain and entire left sided pain and discomfort. The manager of the restaurant asked her if she should call an ambulance, but the patient told the manager to call her daughter who is outside. The patient was brought home with her daughter and went to sleep immediately due to the fear of dying. Her daughter iced her left side of the body for the swelling to go down. The swelling and the symptoms continued and a few days after the fall she went to an urgent care due to ongoing symptoms of headache, dizziness and vertigo. She had an Xray of her left hand done at the urgent care. There was no fracture but was told she had a contusion and a left-hand splint was placed. and was told to follow up with the PCP. She followed up with the PCP who ordered an MRI of the brain. Patient is accompanied by her son.

- **LOC:** positive; loss of consciousness under 2 minutes.
- **Hit head:** positive.
- **Confusion/disorientation:** positive.
- **Dizziness/Balance:** positive.
- **Nausea/Vomiting:** denied.
- **ER visit info:** transported via personal vehicle, same week.
- **Disposition:** discharged with pain management medications and orders to follow-up with PCP.

Mrs. Haysbert was seen today for her initial comprehensive evaluation.. To assist in the quantification of her symptom severity, the Rivermead Post-Concussion Symptoms Questionnaire tool was utilized in the form of tick boxes in the related sections. Sections wherein the rating exceeds 'No More of a Problem' are considered abnormal. The following was reported by Mrs. Haysbert:

1. **Post-traumatic headaches:** On a scale of 1 to 10, Mrs. Haysbert reports headaches of 7 or 8/10 in intensity. Headaches are recurring 1-2 days per week /minimum of 2 with a duration of minimum of 2 hours to the majority of the day."but minimum of 2 hours. When she can't muster through the day to do anything like sitting up she has to be laying down. When she can't muster through the day due to headaches, then she has to go lie down". . Pain is described as throbbing, pulsating, and/or stabbing/piercing. No stabbing or piercing, Pressure feeling, laying down is the only thing that works. Pain is most frequently located in the crown area. It feels like her whole head. No previous history of headaches/migraines is reported. Associated symptoms include light, sound sensitivity, and dizziness. Alleviating factors include dark, quiet spaces and rest. Light and sound are known exacerbating factors. Some days the headaches can get to a level of intensity scale. She would put a warm rag on her left ear. Ear cover that help with that and has had to compromise her appearance. If she feels air in her ear, she feels dizzy and does not feel stable.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2. **Sensitivity to light:** Sensitivity to light is endorsed. She has adapted by minimizing her exposure to bright lights in order to prevent an episode of sensitivity to light.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. **Sensitivity to sound:** Sensitivity to sound is endorsed.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4. **Vision:** She reports seeing white spots in her vision when she is staring off. Patient must close her eyes for a couple seconds for the dots to go away.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5. **Ringing in the ear(s):** If she sleeps on her side, she feels like something is draining or running.
6. **Dizziness:** Sudden quick movement such as standing up quickly, laying down quickly, or turning her head quickly will cause dizziness. She has adapted to doing things slowly, to prevent the episodes of dizziness.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. **Balance:** Sudden quick movements such as standing up quickly, laying down quickly, or turning her head quickly will cause imbalance. She has adapted to doing things slowly, to prevent the episodes of imbalance.
8. **Speech:** Word-finding difficulties are endorsed. The patient has to focus before she can enunciate the words.
9. **Neurocognitive deficits:** Since the incident, Mrs. Haysbert has complained of neurocognitive dysfunction.

- a. **Memory:** She has experienced memory loss. Patient gave an example that one day she was speaking with her relative on the phone and told them she was looking for her phone. They then explained to her that she was speaking on her phone and she realized it was in her hand. Her daughter reported that she has noticed deficits in short term memory. She can't multitask and can only focus on one simple task at a time.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b. **Processing Speed/ confusion:**

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c. **Attention problems:**

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 3 of 27

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Exhibit B

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

10. **Sleep:** Sleep has been unaffected thus far and normal sleep patterns are reported. She only gets up to go to the bathroom. She can rest well at night and still wake up tired.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. **Fatigue/Sluggishness:** Fatigue persists and is unabated by rest.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

12. **Nausea and/or weight change:** Nausea and/or emesis is presently denied. Patient has noticed weight loss.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. **Tremors:** Bilateral tremors were reported by the patient.

14. **Bodily pain(s):** Patient reported body pain only in the left ear.

15. **Numbness/ Tingling:** Numbness and/or tingling is reported in her feet.

16. **Crying Spells/Emotional Regulation:** To date, crying spells absent known cause have not occurred and are not problematic. Emotions are self-regulated and reasonably controlled.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. **Frustration and/or Irritability:** An exacerbation of irritability and or an increase in frustration are reported only when she feels tired.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. **Depression/Anxiety:** Patient's son reported an heightened anxiety since the fall. To further evaluate for the presence of depression, the PHQ-9 was administered to Mrs. Haysbert; results are as below.

Depression Screening Questionnaire (PHQ-9)

QUESTION	SCORE
Little interest or pleasure in doing things?	Not at all - 0
Feeling down or hopeless?	Not at all - 0
Trouble falling or staying asleep, or sleeping too much?	Several days - 1
Feeling tired or having little energy?	More than half the days - 2
Poor appetite or overeating?	Not at all - 0
Feeling bad about yourself — or that you are a failure or have let yourself or your family down?	Not at all - 0
Trouble concentrating on things, such as reading the newspaper or watching television?	Not at all - 0
Moving or speaking so slowly that other people could have noticed. Or the opposite, being so fidgety or restless than usual?	Not at all - 0
Thoughts that you would be better off dead, or thoughts of hurting yourself in some way?	Not at all - 0
TOTAL SCORE = 0 - 4 = No depression, presently	

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 5 of 27

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Exhibit B

Based upon the above information, Mrs. Haysbert's overall score exceeds the parameters for normal; thus, disability is present. With reasonable medical probability, I believe said disability is a result of the incident described in the History of Present Illness section above and will likely result in residual and/or ongoing issues.

PATIENT REPORTED PAST MEDICAL HISTORY:

1. Hypothyroidism
2. Hypertension

PATIENT REPORTED PAST SURGICAL HISTORY:

1. Gallbladder removal
2. 2 c-sections

PATIENT REPORTED ALLERGIES/SENSITIVITIES:

1. NKDA

MEDICATIONS:

1. Tyrosine 500 MG Oral Capsule

PATIENT REPORTED SOCIAL HISTORY: Mrs. Haysbert lives with her daughter and mother. She is not a tobacco user and has no history of use. She does not use alcohol. She denies illicit drug use.

PATIENT REPORTED OCCUPATION PRIOR TO INJURY: College Administrator

HANDEDNESS: Mrs. Haysbert reports right-hand dominance.

PATIENT REPORTED EDUCATIONAL HISTORY: 20 years

PATIENT REPORTED FAMILY HISTORY:

1. Maternal: Hypertension
2. Paternal: Diabetes

REVIEW OF SYSTEMS:

GENERAL/CONSTITUTIONAL: As recorded in the History of Present Illness section above.

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 6 of 27

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Exhibit B

HEAD, EYES, EARS, NOSE, AND THROAT:

Eyes: The patient reports white spots in her field of vision but denies pain, redness, loss of vision, double or blurred vision, flashing lights, dryness, the feeling that something is in the eye and denies wearing glasses.

Ears, nose, mouth, and throat: The patient reports sensation of fluid discharge from her ear but denies ringing in the ears, loss of hearing, nosebleeds, loss of sense of smell, dry sinuses, sinusitis, post nasal drip, sore tongue, bleeding gums, sores in the mouth, loss of sense of taste and dry mouth.

CARDIOVASCULAR: The patient denies chest pain, irregular heartbeats, sudden changes in heartbeat or palpitations, shortness of breath, difficulty breathing at night, swollen legs or feet, heart murmurs, high blood pressure, cramps in Her legs with walking, pain in her feet or toes at night or varicose veins.

RESPIRATORY: The patient denies chronic dry cough, coughing up blood, coughing up mucus, waking at night coughing or choking, repeated pneumonias, wheezing or night sweats.

GASTROINTESTINAL: The patient denies decreased appetite, nausea, vomiting, vomiting blood or coffee ground material, heartburn, regurgitation, frequent belching, stomach pain relieved by food, yellow jaundice, diarrhea, constipation, gas, blood in the stool, black tarry stools or hemorrhoids.

MUSCULOSKELETAL: As recorded in the History of Present Illness section above.

NEUROLOGIC: As recorded in the History of Present Illness section above.

PSYCHIATRIC: As recorded in the History of Present Illness section above.

ENDOCRINE: The patient denies intolerance to hot or cold temperature, flushing, fingernail changes, increased thirst, increased salt intake or decreased sexual desire.

HEMATOLOGIC/LYMPHATIC: The patient denies anemia, bleeding tendency or clotting tendency.

ALLERGIC/IMMUNOLOGIC: As recorded in the History of Present Illness - Allergies section above.

PHYSICAL EXAM

CENTRAL NERVOUS SYSTEM: Patient is able to ambulate independently.

MENTAL STATUS: The patient is oriented to person, place, problem, and time.

MOOD: She appeared to be frustrated during the interview.

SPEECH: Word-finding difficulties were noted at times during the history and exam.

Migraine Disability Assessment Tool (MIDAS)

On how many days in the last 3 months did you miss work and/or school because of your headaches? (You were completely unable to go)	0 days; this does not apply to me.
How many days in the last 3 months was your productivity at work and/or school by half or more because of your headaches? (You were able to go, but unable to perform your best; do not include missed days)	1-3 days
On how many days in the last 3 months did you not do household work (cleaning, shopping, child/relative care, cooking, repairs, yard work, etc.) because of your headaches? (You were completely unable to perform the task)	0 days; this does not apply to me.
On how many days in the past 3 months was your productivity in household work reduced by half or more because of your headaches? (You were able to perform the tasks, but unable to perform at your best; do not include missed days)	0 days; this does not apply to me.
On how many days in the past 3 months did you miss family, social and/or leisure activities because of your headaches?	0 days; this does not apply to me.
TOTAL	0-5 = MIDAS Grade I

MIDAS Scale

MIDAS Grade	Definition	MIDAS Score
I	Little or No Disability = Unlikely to affect daily activities and/or independence.	0-5
II	Mild Disability = Some activities and/or areas of independence are being affected.	6-10
III	Moderate Disability = More activities and/or areas of independence are being affected significantly.	11-20
VI	Severe Disability = Activities and/or areas of independence are profoundly affected.	21+

Used to record acute disability from headaches, the Migraines Disability Assessment or MIDAS tool was completed today with Mrs. Haysbert. Based upon Her answers as provided in the table above, she is classed as having a MIDAS Grade of I which equates to little or no disability due to headaches.

DIAGNOSIS AND TREATMENT PLAN:

○ POST-TRAUMATIC HEADACHE

A post-traumatic headache is defined as one that develops or onsets within the seven days following injury or after regaining consciousness (2; Defrin, 2014). Since the incident on (date), Mrs. Haysbert has suffered from headaches of 7 or 8/10 intensity minimum twice a week. There is a temporal relationship between the incident and the onset of headaches. Headaches are the most frequent complaint following a traumatic brain injury, with a prevalence rate up to 95%. Even at twelve months post-incident, the

cumulative incidence rate remains above 70%. The majority of those suffering experience daily or weekly onset, with the temple, forehead, neck, back of head, eyes, and vertex the most cited locations of pain (1; International Headache Society).

I recommend the following treatment strategies for Mrs. Haysbert:

- **Vitamin and Herbal Supplementation:** Use of the following as directed to naturally prevent and/or treat headaches/migraines.
 - **Riboflavin (Vitamin B12) 25-400 mg daily** – Helps to reduce frequency after one month of use with continued reduction over following two months. Increases energy and may cause a flushed or warm feeling which passes. Urine may be bright yellow. Costs for this vitamin supplement range from \$13.00 – \$30.00 per month.
 - **Coenzyme Q10 (CoQ10 or ubiquinol) 150-200 mg twice daily** – Reduces frequency by more than 50% in some people by increasing cell energy in the brain. Commonly used to improve memory and cognition. May increase energy levels. Costs for this supplement range from \$27.00 - \$55.00 per month.
 - **Magnesium oil topical spray 400-600 md daily/4-5 sprays** – Stimulates blood flow and eases the nervous system for relief from pain. Use close to bedtime as it induces calm and restfulness. Apply to areas where skin is thin, such as the tops of feet to aid in rapid absorption. May cause skin irritation at site resolved after 10-15 minutes. Avoid oral formulation to avoid gastrointestinal side-effects. Taking a bath with Epsom salt may also be of benefit for pain relief throughout the body. Costs for this supplement range from \$15.00 – \$21.00 per bottle, with one bottle lasting 2-3 months with prescribed use.
 - **Butterbur root extract/ Blatterdock (Petasites hybridus) 50 mg 2-3 times daily** – Works to alleviate spasms and decrease swelling from inflammation in the brain to prevent onset of pain. Do not take when pregnant or attempting to conceive due to the risk of birth defects and liver damage. May cause indigestion, burping and some mild gastrointestinal issues that often ease with continued use. Costs for this herbal supplement range from \$19.99 – \$41.50 per month; using inferior brands is advised against.
- **PRN Therapy:** Mrs. Haysbert is advised to use Tylenol 500 MG twice a week. The treatment will be evaluated during the follow up.

○ **MILD TRAUMATIC BRAIN INJURY WITH NEUROCOGNITIVE DEFICITS**

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 10 of 27

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Exhibit B

Since the incident, Mrs. Haysbert is suffering from neurocognitive deficits. The following areas are affected based on history:

- Memory
- Learning
- Visual/Spatial analysis
- Judgement
- Executive Functions

I am initiating neurorehabilitative exercises, listed below, to improve Her neurocognitive deficits. Mrs. Haysbert is advised to do these neurorehabilitative exercises on a daily basis for a minimum of thirty minutes. She is also advised to keep a log of progress and the number of hours spent engaged in these exercises and bring it with her to each subsequent encounter.

Patient compliance is expected and anticipated.

○ **ENVIRONMENTAL ENRICHMENT**

Brain stimulation via physical and social surroundings is known to increase psychological and physiological well-being. When provided with a richer, more stimulating environment, higher rates of synaptogenesis and more complex dendrite arbors are actualized as brain plasticity increases. Essentially, the brain's network grows and strengthens, creating new and/or rebuilding damaged pathways. Environmental enrichment therapies inclusive of physical, cognitive, and social stimulation, have been proven to improve both functional and histological outcomes in those who have suffered from a traumatic brain injury. Mrs. Haysbert has suffered a traumatic brain injury; she would benefit from an enriched environment to aid in the recovery process and overall well-being. Costs to implement these therapeutic changes vary, but an average of \$1,500.00 - \$5,000.00 annually is appropriate. The following should be implemented in Mrs. Haysbert's home environment to bolster Her recovery and work towards regaining Her cognitive capacity:

- Mirrors, pictures, photographs, books, and interesting things to look at.
- Varied lighting from lava lamps or colored bulbs or neon signs. Christmas lights or those meant for outdoor use will work.
- Items of comfort for relaxing such as rugs, large pillow, bean bags, and/or blankets.
- Chairs and seating of varied types such as rocking chairs, hammocks, etc.
- Calming music or sounds such as those like the ocean or rain. Classical or instrumental music will work well.

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 11 of 27

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Exhibit B

- Pleasant scents; lavender, clary sage, and peppermint have calming or attentional properties.
- Textures of all varieties. Include varied materials from wood to fuzzy pillows.
- Opportunities to exercise, as able. Treadmills, stationary bikes, rowing machines, yoga mats, etc.
- Aesthetically interesting with height variations and surface changes throughout. Ensure that the environment is pleasing and provides opportunity for inquiry and contemplation.
- Opportunities for socializing in a limited or controlled capacity such as volunteering, coffee 'dates', library outings, and mall-walking.
- Creative outlets and the supplies needed for painting, coloring, journaling and the like.
- Cognitively challenging tasks or materials; word-finds or crosswords, newspapers, documentaries, or even local classes will serve well.

○ **NEUROREHABILITATIVE EXERCISES**

The following websites and apps may partially restore and/or improve diminished brain functions:

BrainHQ: www.brainhq.com

Happy Neuron: <http://www.happy-neuron.com/>

Lumosity: <https://www.lumosity.com/>

Tactus Therapy: <https://tactustherapy.com/therapy/>

Web Sudoku: <https://www.websudoku.com>

Lumosity: a free app version of the full site with mobile compatibility. Tailored goal format allows for working on specific areas of concern, including memory, attention, problem solving, processing speed, and cognitive flexibility.

Eidetic: Utilizes spaced repetition to improve memory recall and recognition. Different from many training apps as it utilizes contextual knowledge, thus bolstering the same.

Elevate: After an initial quiz to assess baseline, daily tasks are set for personal goals to improve in areas of weakness. Brief but thorough games exhibit progress via visual maps.

Fit Brains Trainer: Increasingly complex and challenging tasks build upon each other to expand brain prowess.

Personal Zen: Focuses on anxiety reduction and emotional stability.

Brain Trainer Special: Varied levels for several concepts such as sequencing, calculations and numerical capacity, and memory.

Brain Fitness: Series of memory training exercises to increase focus, problem-solving skills, attention, memory, and overall cognitive capacity. Please note, there is both a free and a paid version.

○ **STRESS MANAGEMENT**

General stress management techniques including meditation, yoga, and massage therapy may be helpful.

Compensatory strategies that may be useful for Mrs. Haysbert to implement in Her daily living are as follows:

- Allowing more time to complete tasks to avoid time pressures.
- Utilizing a day planner/calendar to record appointments and important future tasks.
- Writing down and organize information to be remembered by carrying a small notebook and pen.
- Breaking up longer tasks into multiple, shorter tasks and avoid multitasking.
- Completing tasks in a quiet room, turning off televisions or other distracting sources.
- If becoming fatigued or losing focus, stop and take a break before returning to the task.

○ **DIFFUSION TENSOR IMAGING**

I am ordering Diffusion Tensor Imaging of Her brain. This test is warranted to evaluate the extent of damage to the white matter tracts following head injury. DTI will allow more precise discovery into the areas damaged, at a level unable to be viewed with traditional MRI or CT; these techniques are not sensitive to detecting diffuse/traumatic axonal injuries (DAI/TAI) - the major brain injuries observed in mTBI (6; Shenton et al, 2012). Symptoms in this patient group are the result of alterations undetectable by traditional CT and/or MRI machinery, thus giving the appearance of a 'normal' brain. While structural knowledge is important for Mrs. Haysbert's care, information garnered from

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 13 of 27

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Exhibit B

DTI reveals microscopic damage and is very helpful for the targeted neurocognitive rehabilitation and prognostication. Costs for this sophisticated imaging, absent insurance, range from \$12,500.00 - \$35,000.00, depending on facility and interpreter expertise.

○ **NEUROPSYCHOLOGICAL ASSESSMENT BATTERY**

A Neuropsychological Assessment Battery is a comprehensive test or assessment of the patient's brain functions: attention, processing speed, learning, memory, intelligence, language, sensory acuity, calculation, visuospatial ability, problem solving, judgement, abstract thinking, mood, and temperament. After brain injury, many or all of these cognitive domains may be impaired or affected. Simple screenings, while appropriate for a high-level overview or diagnostically challenging cases, cannot ascertain the depth or breadth of a comprehensive series, specifically in a complex presentation wherein multiple domains appear impacted (7; Kosaka, 2006). This test is warranted and of benefit for Mrs. Haysbert as the information obtained from this testing will be helpful in clinical decision making as well as ongoing and future neurocognitive rehabilitation. Costs for this intensive battery vary by provider expertise and level of credential, with a range of \$8,500.00 - \$22,000.00 typical for those without insurance.

○ **NEUROCOGNITIVE RECOVERY SUPPLEMENTS**

In addition to a diet filled with antioxidant foods, such as berries, carrots, tea, nuts, and a variety of vegetables, and as part of a low saturated fat and reduced refined sugar diet, the following have been shown to be of benefit to those recovering from traumatic brain injury:

- **Vitamin D 3000 IU daily with food** - supports the growth of new brain cells.
- **Fish Oil / Omega 3 Supplements 2-3 grams with food daily** - may improve brain function.
- **Probiotics** - improves gut health and, via the vagus nerve and production of neurotransmitters, brain health, too.
- **Magnesium L Threonate 1-2 grams daily** - boosts brain levels of magnesium and associated benefits for sleep, anxiety, and cognition.
- **Vitamin B12 1000 micrograms daily** - may prevent brain atrophy.
- **Coenzyme Q10 100 mg daily** - protects brain cells from oxidative damage.
- **N-Acetyl Cysteine 150 mg daily** - regulates glutathione and glutamate levels to improve brain health.
- **Zinc 20 mg daily** - aids in brain signal transmission and cell growth.

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 14 of 27

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- **Alpha Lipoic Acid (ALA) 100 mg daily** - fights free radicals, reduces inflammation, and offers protective benefits.
- **Phosphatidylserine (PS) 100 mg daily** - protects the brain and aids in messaging between cells.
- **Glucoraphanin 15 mg daily** - prevents damage, even delayed, and aids in cognitive restoration.
- **Curcumin (Turmeric) 2 gm daily** - reduces oxidative stress and protects the brain; reduces the overall effects of concussive injury on cognition.

Monthly cost for these supplements varies by quality and retailer. Allotting \$100.00 - \$300.00 monthly, or \$1,200.00 - \$3,600.00 annually, should provide for their acquisition.

○ **SPEECH ABNORMALITIES**

Brain damage, such as that imparted by trauma, is a major cause of adult-onset communication disorders, specifically aphasia, apraxia, and dysarthria. Diffuse brain injury is known to cause difficulties in comprehension and expression. Damage to the left hemisphere often manifests as aphasiac conditions and dysarthria, while right hemisphere damage accounts for confrontational naming, word fluency, reading, writing and related impairments (8; Bobba et al, 2019). Mrs. Haysbert has been suffering from slurred speech, dysnomia, and word-finding difficulties.

To address this newly onset communication concern, instruction to practice deep breathing exercises, talk slowly to prevent distortions of speech, and slow down the pace of life in general was given. An educational handout on speech dysfunctions after Traumatic Brain Injury, and a handout of speech exercises to help improve speech at home were provided.

Professional intervention for those suffering with communication impairments following brain injury has been proven effective for the majority of patients. With tailored treatment plans, studies show that between 67% - 82.5% of patients showed improvement in language-based capabilities (9; Coelho et al, 1996). To ensure optimal rehabilitative care, I will order an evaluation by a Speech-Language Pathologist and formal speech therapy if the symptoms do not improve with provided home speech exercises. Individualized treatment plans vary in intensity and duration dependent upon patient need. Costs for each treatment session range from \$95.00 - \$500.00, absent insurance. For a 24-session plan, this equates to \$2,280.00 - \$12,000.00.

○ **ANXIETY DISORDER**

Since the incident, Mrs. Haysbert has been experiencing irritability, fatigability, and anxiety.

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 15 of 27

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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Helpful apps for Mrs. Haysbert:

Happify: Emotional intelligence and training for behavior adaptation; beneficial for adjusting to life after traumatic brain injury.

Positive Activity Jackpot: For those with Post-traumatic Stress Disorder or depression; coping skills and behavioral therapy via apps and a reward system.

ReliefLink: an app created by Dr. Kaslow for those suffering with depression to track and monitor symptoms, response, etc. and find assistance near-by.

CBT Thought Diary: Utilizing the principles behind cognitive behavioral therapy, this app encourages the user to record and monitor feelings, symptoms, and actions. In doing so, reflection can be made to exhibit patterns and aid in behavioral adjustment.

○ **POST-TRAUMATIC VERTIGO AND BALANCE DISORDER**

Vestibular dysfunction has been shown to adversely affect processes of attention, and increased demands of attention can worsen the postural sway associated with vestibular disorders. Dysfunction may occur centrally, due to damage to the vestibular nuclei in the brainstem after a head injury, or peripherally, due to damage in the inner ear, such as with Benign Paroxysmal Positional Vertigo (BPPV). After brain injury, vestibular dysfunction ranges from 15%-30% in mild or blast-related TBI, to 100% in those who sustain temporal bone impact or fracture. Presentation includes dizziness, balance deficits, vertigo, visual impairments, and auditory changes (14; AAM PR, 2013).

Mrs. Haysbert endorsed and/or displayed signs/symptoms of vestibular dysfunction during examination. Treatment initiated today includes the following:

- Meditation, omega 3 supplementation, and substituting TV or cell phone watching with stable visual activities, such as reading.
- Vestibular exercises at home (shown below and in handout provided) to improve upon dizziness and imbalance.
- Videonystagmography (VNG) for the diagnosis and rehabilitation of imbalance and dizziness as reported and/or exhibited during examination. Cost for this testing ranges from \$350.00 - \$1,500.00, absent insurance.

Additional information for balance improvement:

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 16 of 27

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Exhibit B

Increasing strength and flexibility, specifically in the ankle and hip muscles. Activities such as mini-squats, toe-raises, and/or standing leg lifts, when physical functioning allows, are beneficial.

Many practitioners are utilizing Wii and other physically interactive gaming systems to aid in vestibular rehabilitation. This can be a fun, simple way to build and restore damaged systems.

Single leg balancing while maintaining proper posture, initially for thirty seconds can be done first with the eyes open, and then with the eyes closed with improvement. This can be done anywhere where safety is not a concern and when fall risk is minimal. Waiting in line, while cooking, etc.

Practicing standing or walking in different conditions, when capable, will build physical ability and confidence, while giving the visual system a workout, as well.

Online resources available to aid/educate in recovery:

aVOR - A free app tool, useful for those with vestibular ocular reflex system disorders. Benign Positional Paroxysmal Vertigo education is provided.

BalanceandMobility.com - Education regarding causation and treatments available.

Vestibular Rehabilitation Therapy for Patients - Created by Physiotherapist Dr. Jordan Tucker, this video discourses vestibular rehabilitation. https://www.youtube.com/watch?v=pkA75_RWHYA. (Googling his name also works).

VertiGo Exercise - A comprehensive app that provides video instruction of exercises to improve balance. Progress and time spent are built-in for ease of use.

Vertigo Exercises - Visual renderings of causation, along with video demonstrations of relieving exercises, are free in this app.

○ **VISUAL DISTURBANCES**

Vision is the most important source of sensory information. Consisting of a sophisticated complex of subsystems, the visual process involves the flow and processing of information to the brain. The visual system is really a relationship of sensory-motor functions, which are controlled and organized in the brain. After TBI, there is frequently a shifting of the visual midline, vitreous hemorrhaging, and macular or retinal

abnormalities. Common visual changes following injury include blurred vision, double vision, and decreased peripheral vision. Others suffer photophobia, accommodation, eye movement, convergence, pupillary function, and/or visual fields impairments or changes. Studies indicate that up to 60% of TBI patients suffer from some visual dysfunction in at least one eye (15; Armstrong, 2018).

Mrs. Haysbert reports seeing white spots in her vision. She has seen an optometrist and her prescription has not changed, I recommend she follow up with her optometrist on a yearly basis.

Additionally, I have counseled her to wear polarized, rose-tinted glasses at all times for the next three months to aid in the alleviation of photophobia. Costs for these, as non-prescriptive lenses, range from \$150.00 - \$1,000.00 each.

Recommended retailers of rose-tinted glasses:

- **Felix Gray** - Proprietary blue light filters embedded in polarized and anti-glare lenses. Costs span most budgets and styles are plentiful. Available in prescription and non.
- **Theraspecs** - Designed to aid in migraine and post-concussion relief, these glasses come in multiple styles and price points.

○ **HYPERACUSIS**

The efferent system of the ears provides for numerous functions; perhaps most significantly is noise protection and adaptation and frequency selectivity by modification of the outer hair cells. Traumatic brain injury has been shown to significantly reduce or replete the auditory efferent system in up to 87% of those suffering post TBI auditory-related complaints (17; Attias et al, 2005).

Sensitivity to sound and/or loud sounds is reported. I have counseled Mrs. Haysbert regarding avoidance of exposure to such when possible, as well as the use of ear plugs for mitigation of that which is unavoidable. Costs for noise-cancelling ear plugs range from \$10.00 - \$300.00 and can be purchased from numerous online retailers. Additionally, we have discussed coping mechanisms and tactics to enable her to deal with this concern as it arises.

○ **ONGOING/ LONG-TERM CARE NEEDS**

A Life Care Plan (LCP) is a document that outlines a comprehensive future plan for medical requirements for patients with long-term treatment needs. Mrs. Haysbert. is suffering from the concerns discoursed in this document which will likely require ongoing

and perhaps lifelong care. The checklist below was used to assist in this determination of need.

Life Care Plan Questionnaire

Long-term physical therapy and/or pain management for neck pain?	
Neck surgery performed?	
Neck surgery required or likely so?	
Long-term physical therapy and/or pain management for back pain?	
Back surgery performed?	
Back surgery required or likely so?	
Long-term treatment for traumatic brain injury and related complications?	Y
Long-term physical therapy?	
Long-term occupational therapy?	
Long-term vocational therapy	
Long-term rehabilitation?	
Assistance with bathing, shopping, meal preparation, and/or money management or related tasks?	
Special equipment such as a wheelchair, back brace, and/or prosthesis?	
Long-term mental/behavioral health services for depression, anxiety, PTSD, etc.?	
Home/environmental modifications for safety/independence?	

It is my medical opinion, based upon experience and education, that Mrs. Haysbert has likely suffered a traumatic brain injury secondary to the fall suffered as discoursed in the History of Present Illness section.

Mrs. Haysbert was given handouts on at-home vestibular exercises, neurorehabilitative exercises, speech therapies, stress management, rehabilitation supplements, medication education, and sleep hygiene where pertinent.

I will follow up with her in 6 months. She will need to complete the Neuropsychological Assessment Battery and diffusion tensor imaging.

Throughout this assessment and examination, supportive techniques inclusive of active listening, validation, and supportive counseling, were utilized to extend understanding, address distress, and encourage healthy coping mechanisms in regard to requisite post-incident adjustments. Communications were entered with the intent of empathetic listening, reflective comments, and to proffer encouragement. Mindfulness and self-awareness were supported, as were healthy choices. Mrs. Haysbert responded well to these interventions and left the office in a seemingly less distressed state.

Thank you for allowing me to participate in Mrs. Haysbert's care after her traumatic brain injury. If I can be of further assistance, please don't hesitate to contact me.



Huma Haider, MD
Medical Director, National Brain Injury Institute
Board Certified in Neurocritical Care through United Council for Neurologic Subspecialties
Certified Life Care Planner (CLCP)
Board Certified in Anesthesiology through American Board of Anesthesiology

ORDER FORM FOR ADDITIONAL DIAGNOSTIC STUDIES AND SERVICES

Patient Name: Haysbert, JoAnn	MR#: HJ50647
Date of Birth: 9/22/48	Date of Injury: 5/23/18
Phone Number: (310) 213-7142	Date of Service: 9/18/20

Please fax the results of all the imaging studies, testing and consultation reports to NBII at 1-281-942-4504 as soon as they are available.

Diagnosis	ICD-10 Codes	CPT Codes	Recommendation
Imaging			
Traumatic Brain Injury	S06.2	70551	<input type="checkbox"/> MRI of the Brain and Brain Stem w/out contrast
		70552	<input type="checkbox"/> MRI of the Brain and Brain Stem with contrast
		70553	<input type="checkbox"/> MRI of the Brain and Brain Stem with + w/out contrast
		70540	<input type="checkbox"/> MRI of the Temporal Bone and Internal Auditory Canal w/out Contrast
		73221	<input type="checkbox"/> MRI of the Left/Right Shoulder w/out contrast
		73223	<input type="checkbox"/> MRI of the Left/Right Shoulder with and w/out contrast
		72141	<input type="checkbox"/> MRI of the Cervical Spine w/out contrast
		72156	<input type="checkbox"/> MRI of the Cervical Spine with and w/out contrast
		72146	<input type="checkbox"/> MRI of the Thoracic Spine w/out contrast
		72157	<input type="checkbox"/> MRI of the Thoracic Spine with and w/out contrast
		72148	<input type="checkbox"/> MRI of the Lumbar Spine w/out contrast
		72158	<input type="checkbox"/> MRI of the Lumbar Spine with and w/out contrast
		76498	<p>■ Diffusion Tensor Imaging (DTI) of the Brain with measurement of Fractional Anisotropy (FA), Mean Diffusivity (MD), Radial Diffusivity (RD) and Axial Diffusivity (AD)</p> <p>■ Areas of interest for tractography are: Head Injury, Cognitive Dysfunction, and Psychiatric</p>
			■ DTI of the Brain Imaging review by Specialist Neuroradiologist
		78607	<input type="checkbox"/> SPECT Scan of the Brain
Tremors/ seizure disorders	G40.909	95951	<input type="checkbox"/> Electroencephalogram - Routine (72 Hour VEEG with intermittent monitoring for detection of interictal epileptiform abnormalities AND subclinical seizure activity

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 21 of 27

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			AND/OR clinical events suspected to be seizures)
Neuralgia/ neuritis	M79.2	95855, 95856	<input type="checkbox"/> Electromyogram Routine
Syncopal Episodes	R55	93880	<input type="checkbox"/> Bilateral carotid doppler
Dysphagia	R13.10	99205	<input type="checkbox"/> Gastroenterology/SLP evaluation
Snoring, Insomnia	R06. 83, G47.00	95811	<input type="checkbox"/> Polysomnography
Diabetes Insipidus	E23.2	80418	<input type="checkbox"/> Evocative/Suppression testing; Anterior Pituitary Gland Evaluation; complete hormone panel (GH, Prolactin, LH, FSH,TSH, and ACTH)
			<input type="checkbox"/> Other:
IV Infusion Therapy for Headache Management			
Post-traumatic Headaches (Intractable)	G44.301	96374 & J1110	<input type="checkbox"/> IV Infusion Therapy with Dihydroergotamine (DHE)
		96374 & J3490	<input type="checkbox"/> IV Infusion Therapy with Valproic Acid
		96374 & J3490	<input type="checkbox"/> IV Infusion Therapy with Ketamine
Posttraumatic Headache Procedures			
Post-traumatic Headaches (Intractable), Occipital Neuralgia	G44.301, M54.81	64615	<input type="checkbox"/> 33 Points Botox Injection
		64450 & 77002	<input type="checkbox"/> Third Occipital Nerve Block under Fluoroscopic guidance
		64405 & 76942	<input type="checkbox"/> Greater Occipital Nerve Block under Ultrasound guidance
		64450 & 76942	<input type="checkbox"/> Lesser Occipital Nerve Block under Ultrasound guidance
Other			
Dysphasia/Aphasia	R47.0	92507	<input type="checkbox"/> Speech Therapy
Benign Paroxysmal Positional Vertigo/ Disequilibrium	H81.93, H81.10	97112	<input type="checkbox"/> Vestibular Therapy [Balance and Gait Rehab and Canalith Repositioning for BPPV]
		92547 92548	<input checked="" type="checkbox"/> Videonystagmography (VNG) <input type="checkbox"/> Computerized Dynamic Posturography (CDP)
Depression, Anxiety, PTSD	F32.9, F41.9, F43.1	90837	<input type="checkbox"/> Transcranial Magnetic Stimulation (TMS)
		90791	<input type="checkbox"/> Cognitive Behavioral Therapy (CBT) <input type="checkbox"/> Psychiatric evaluation
Traumatic Brain Injury w/ Neurocognitive Deficits	G31.84	97127	<input type="checkbox"/> Neurocognitive Rehabilitation (Outpatient)
		96136, 96137	<input type="checkbox"/> Neuropsychological Evaluation
Bruxism	G47.63, F45.8	D9940	<input type="checkbox"/> Evaluation for Occlusal Guard by a Dental Professional
Hearing Loss	H91.90	92551, 92552	<input type="checkbox"/> Audiology
Blurred/Impaired Vision	H53.8, H54.7	92102	<input type="checkbox"/> Optometry/Neuro-Ophthalmology

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 22 of 27

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Neck Pain, Lower Back Pain	M54.2, M54.5	97162, 97166	<input type="checkbox"/> Physical Therapy/ Occupational Therapy
Shoulder Muscle Tear	M75.102	99205	<input type="checkbox"/> Consultation with an Orthopedic Surgeon
Cervical Spine Disc Herniation, Thoracic Spine Disc Herniation	M50.10, M51.24	99205	<input type="checkbox"/> Consultation with Spine Surgeon
Pain, acute or chronic, due to trauma	G89.11, G89.21	99205	<input type="checkbox"/> Evaluation by Pain Management Specialist

Huma Haider

Huma Haider, MD
Medical Director, National Brain Injury Institute
Board Certified in Neurocritical Care through United Council for Neurologic Subspecialties
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Exhibit B

Preferred Ancillary Service Providers - Los Angeles, CA

Provider	PoC with whom to coordinate referral and arrange lien
National Brain Injury Institute <u>Services Offered</u> <ul style="list-style-type: none"> • Diffusion Tensor Imaging Scan of the Brain (DTI) • Neuropsychological Assessment Battery (NAB) • Computerized Dynamic Posturography (CDP) • Videonystagmography (VNG) • Certified Life Care Plans (CLCP) 	Juan Hernandez jhernandez@nationalbii.com P:281-769-3906
Med Trak VNG <u>Services Offered</u> <ul style="list-style-type: none"> • Videonystagmography (VNG) 	Scott Auerbach Scott@medtrakvng.com P:347-742-4100
Dilanchian & Associates Chiropractic Locations <u>Services Offered</u> <ul style="list-style-type: none"> • Chiropractic Adjustments • Electronic Muscle Stimulation • Ultrasound • Mechanical Massage • Infrared Heat Therapy • Paraffin Wax 	Referral Form Mel Dilanchian mel@DrDilanchian.com P:818-247-1331
Interventional Pain Management Center, Stem Cell Regenerative Therapy <u>Services Offered</u> <ul style="list-style-type: none"> • Spinal Cord Stimulation • Neck & Back Pain • Radiofrequency Ablation • Herniated Disc and Spinal Stenosis • Platelet Rich Plasma (PRP) • Stem Cell and Regenerative Cell Therapy 	Jessica Ramirez aurorapainclinic@gmail.com P: 877-433-7246
A Medical Expert Network 212 26th Street, Ste. #160 Santa Monica, CA 90402 <u>Services Offered</u> <ul style="list-style-type: none"> • Videonystagmography (VNG) 	info@amenexpert.com P: 888-419-2775 Fax: 866-864-4566
Rest Analysis <u>Services Offered</u> <ul style="list-style-type: none"> • EEG/ERP 	Dr. Donna Meeks drdonnameeks@gmail.com P:661-209-2782
Laser MD Pain Relief <u>Services Offered</u> <ul style="list-style-type: none"> • Laser pain management 	Dr. Harold Kraft help@lasermdpainrelief.com P: 213-550-5600 Fax: 213-325-6425

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 24 of 27

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Andre Aboolian, MD, FACS Plastic & Reconstructive Surgery 120 S Spalding Drive #233, Beverly Hills, CA 90212 <u>Services Offered</u> <ul style="list-style-type: none"> Reconstructive Surgery 	Ren Aghajani marketing@andreaboolian.com P: 310-888-8862
Precise Imaging Locations <u>Services Offered</u> <ul style="list-style-type: none"> MRI X-Ray CT PET Scan 	Referral Form Mike Rashidi mike@precisemri.com P: 800-558-2223 ext. 102 Fax: 888-715-7001
Los Angeles Brain Science Project Locations <u>Services Offered</u> <ul style="list-style-type: none"> General Neurological Care EDMS EEGS Refers MRIs to preferred facility 	Sara Ricker sricker@losangelesbrain.com P: 818-617-9509 Fax: 310-957-2346
AAT.L.C. HealthCare, Inc. <u>Services Offered</u> <ul style="list-style-type: none"> Nurse Therapy Physical Therapy Homecare Givers 	Carolene Bookman carolene@aaatlc.com Todd Adams, D.C. todd@aaatlc.com Margie M. Meza margie@aaatlc.com P: 310-271-1887
MEDNET Medical Services, Inc. <u>Services Offered</u> <ul style="list-style-type: none"> Sleep Study Psychotherapy Family Therapy Couple Therapy Med-Legal Evaluation 	Michael Aghvami maghvami@mednetcenters.com P: 818-646-0118
Studio City Spine Center <u>Services Offered</u> <ul style="list-style-type: none"> Chiropractic Adjustments 	Dr. Ruben G. Chlydran Dr.Chldryan@gmail.com P: 818-255-6526

Please forward any reports for services obtained to info@nationalbii.com so that we may incorporate them into our care of the patient. Thank you.

- The NBII Team

Initial Comprehensive Evaluation Via Phone for Haysbert, JoAnn | 25 of 27

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Exhibit B

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DIFFUSION TENSOR IMAGING

Patient Name: Haysbert, JoAnn

Date of Birth: 09/22/1948

MR#: HJ50647

Date of Injury: 05/23/2018

Date of Study: 09/18/2020

Requesting Physician: Huma Haider, MD

Site Name and Equipment: Medical Imaging of Southern California, Beverly Hills, CA, 3T, Siemens MRI Scanner

INDICATION: This is a 71-year-old woman who on 05/23/2018 was at a restaurant and when she got up from the table, she slipped and fell on what was described as a slippery floor, impacting her head, with some loss of consciousness and the onset of neurologic symptoms, a number of which have persisted.

STUDY: MRI OF THE BRAIN WITH DIFFUSION TENSOR IMAGING

METHODS: These images demonstrate the detailed anatomy of the brain with supplemental analysis through evaluation of fractional anisotropy and diffusion tensor imaging tractography.

The report is provided in three segments:

- 1) Tractography from diffusion tensor imaging (DTI)
- 2) Fractional Anisotropy analysis from diffusion tensor imaging (DTI)
- 3) General brain imaging with Susceptibility Weighted Imaging (SWI).

Diffusion tensor imaging (DTI) was obtained in a 3-Tesla Siemens imager using thirty directions of diffusion. The fractional anisotropy and tractographic analysis were processed using FDA approved NORDIC Brain Ex clinical workstation software.

DTI TRACTOGRAPHY REPORT AND ANALYSIS:

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TRACTOGRAPHY C REPORT:

TECHNICAL: These images were obtained with 30 directions of diffusion gradients on a **Siemens 3-Tesla imager**, there are no significant artifacts impairing image interpretation.

The tractographic analysis is carried out by adjusting the fractional anisotropy threshold as well as the degrees of angulation and tractographic segment length as inputs to the FACT tractographic algorithm for tract analysis in order to identify areas of tractographic deficits and continuities.

Loss of tractographic continuity does not demonstrate a complete loss of connections; rather it is the effect of a decrease of coherently directed fractional anisotropy along the course of a tract. Such a drop off halts the progress of the tractographic reconstruction process so that the remainder of the tract does not appear. These have clinical significance because they represent clinically relevant interference with transmission of neurological information from one part of the brain to another. The presence of such drop off point does not represent complete loss or obstruction, but rather detects the presence of a relative drop off that affects the normal function of a major tract.

FINDINGS: The tractographic analysis reveals losses bilaterally in the frontal lobe with expected effects of impairment of multistep planning, map-based planning and emotional control release functions. There are losses additionally appreciated bilaterally in the supra-callosal cingulum which would have the expected effects of increased anxiety and depression. Losses are appreciated in the left parietal lobe in the area of the angular gyrus and in this right-handed individual this would be expected to have the effects of impairment of word finding and some effects on calculation ability. Losses are seen bilaterally in the arcuate fasciculus. The right side arcuate fasciculus losses can affect the prosody or flow of speech and the left arcuate fasciculus losses can affect a variety of more complex speech functions. Note is additionally made of some losses in the mid-portion of the corpus callosum which can suggest some degree of diffuse axonal injury with general cognitive impairment. There are losses appreciated in the pillars of the fornix on the left side and the crus of the fornix on the right side which can have effects on impairing new memory formation. The right parietal lobe is generally normal in appearance. The temporal lobes are generally normal in appearance, right and left. The right and left occipital lobes are

generally normal in appearance. No abnormalities are appreciated in the area of the middle cerebellar peduncle, right or left side.

Three dimensional 360 degree rotations are provided in the DICOM data set for visualization of these findings.

TRACTOGRAPHY IMPRESSION: Bilateral losses in the frontal lobes affecting particularly the area of the superior, middle and inferior frontal gyri with expected effects on multistep planning, map-based planning and emotional control release functions. There are losses on the left side in the parietal lobe extending into the area of the angular gyrus with expected effects of impairment of word finding and calculation ability. Losses are appreciated bilaterally in the arcuate fasciculus which would be expected to have effects on conversation such as impairment of prosody or flow of speech as to the right side and more complex variety of conversational speech impairments associated with the left side abnormality. There are losses in the area of the mid-portion of the corpus callosum which is indicative of diffuse axonal injury that may affect cognition more generally. There are losses bilaterally in the supra-callosal cingulum with expected effects of increased anxiety and depression. Losses appreciated in the right crus of the fornix and the left pillar of the fornix on detailed formal tractographic evaluation of the fornix and the limbic system reveal abnormalities which will have the expected effects of impairment of new memory formation. Overall, these findings demonstrate multiple abnormalities with expected effects on cognition, emotional behavior and neurologic functions as identified above. The degree of injury appreciated in the images would be expected to result in clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

FRACTIONAL ANISOTROPY (FA) REPORT AND ANALYSIS:

These images demonstrate the analytical level information concerning brain structure. The fractional anisotropy measurements are objective assessments of brain regions either obtained for standardization measurements or comparing right and left structures. Data is obtained with 30 directions of diffusion in a 3Tesla **Siemens scanner**.

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VOLUMES OF INTEREST (VOI's): In all cases the volumes of interest (VOI's) that were measured are selected areas, entirely in white matter, of the highest intensity for fractional anisotropy as visualized by a fractional anisotropy overlay method. This method results in measurements of highest levels of fractional anisotropy in an anatomically recognizable brain white matter structure in the regions assessed. Data is provided with the size in cubic millimeters of the VOI, as well as the mean, minimum and maximum of FA values in the VOI with standard deviation calculated. Histograms are provided for each VOI that can reveal any unwanted bimodal distribution. Image captures were obtained demonstrating the location and size of each VOI measured as shown in three imaging planes. Further, the histograms provided show the variability of anisotropy among the voxels measured within each VOI. Significant right/left asymmetries in fractional anisotropy are considered clinically relevant on a prima facie basis. For a given level of anisotropy, a smaller size of a VOI – that is otherwise bilaterally symmetric – will reveal a reduced volume of that tract and this size difference also has clinical significance in many situations.

CLINICAL BASIS (Scientific Model): This fractional anisotropy analysis is carried out according to the method and clinical concept of Brander et al: *Diffusion Tensor Imaging of the Brain in a Healthy Adult Population: Normative Values and Measurement Reproducibility at 3 T and 1.5 T*; Acta Radiologica (2010), Volume 7 pages 800-807, in which VOI's are measured for fractional anisotropy using the Splenium of the Corpus Callosum as a baseline measure to be compared with other individuals as well as an internal references to assess relative FA drop off in other brain regions. The data provided in articles such as the Brander study show expected relative fractional anisotropy measures using the Splenium of the Corpus Callosum as the standard, because this will tend to have the highest fractional anisotropy in the brain and can therefore provide a cross reference to other imaging subjects as well as provide a basis for assessing the degree of drop-off present to any given brain region associated in a relative to a comparative, standardized set of findings from large numbers of normal individuals.

There are more than 15,000 high quality peer reviewed publications showing the utility and clinical relevance of DTI and only one or two publications written by professional defense experts that attempt to formally raise concerns about utility (e.g. *Wintermark, et*

al (2015), Imaging Evidence and Recommendations for Traumatic Brain Injury: Advanced Neuro- and Neurovascular Imaging Techniques AJNR 36:E1-E11) mostly by pointing out that the vast majority of publications use groups of patients (usually required for all published studies) but that legal cases focus on individuals. However, Wintermark provided an unreliable biased assessment because he improperly omitted excellent studies showing high clinical and legal utility of DTI data for individuals such as *Yuh et al (2014): Diffusion Tensor Imaging for Outcome Prediction in Mild Traumatic Brain*

Injury: A TRACK-TBI Study, Journal of Neurotrauma 31:1457-1477; and *Mustafi et al: Acute White-Matter Abnormalities in Sports-Related Concussion: A Diffusion Tensor Imaging Study from the NCAA-DoD CARE Consortium*. Journal of Neurotrauma, ePub 2017.

CLINICAL BASIS (Report Methodology): By viewing an FA overlay on a high resolution, co-registered MP-RAGE three dimensional brain MRI acquisitions, asymmetries and drop-offs can be identified as to identified anatomical brain structures. For these VOI locations, the mean and standard deviation data can be used to assess the statistical significance of any different in overall FA for a VOI compared with either the FA of the Splenium or with the FA of a similar VOI on the opposite side. Only a single combined FA for right and left Fornix is obtained in some cases because of its small size if it is not possible to obtain usable measures for each side.

SCIENTIFIC BASIS: Fractional anisotropy is expressed as fraction between 0 and 1 and reflects the degree to which fibers within a given voxels or group of voxels measured and assessed in the volume of interest, tend to share a coherent single direction and high health with good quality within the measured volume. A loss of fractional anisotropy is correlated with a decrease of function or transmission to a given white matter tract area. When two different tracts pass through each other having different directions, incorrectly low FA levels can be obtained, but this is controlled for here by selecting well recognized white matter brain structures that have a coherent single direction. Additionally, matching the same structure right to left corrects for this

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directional diversity issue. As for comparisons with the Splenium FA values, the data from the Brander et al article provides a useful well documented clinical framework that corrects for the directional diversity issue.

RESULTS (STANDARDIZATION): The splenium of the corpus callosum has a fractional anisotropy of 0.78, which is well within normal range, and this is used as a baseline for comparison with other individuals and for comparison with other structures for this individual's brain.

RESULTS (FINDINGS): The splenium is commented on above. The genu of the corpus callosum is at 0.81, also within the normal range. The right corona radiata, measured at the genu of the internal capsule is at 0.68, within the normal range, and left corona radiata measured at the level of the internal capsule is at 0.76, also within the normal range. The right to left difference is not statistically significant. On the right side at the stem of the white matter for the superior, middle and inferior frontal gyri, the fractional anisotropy is 0.22, which is quite low. The left side measures at 0.32. The right to left difference is not quite statistically significant. The overall level is quite low however and suggestive of problems which will result in impairment of multistep planning, map-based planning and emotional control release functions. The right parietal lobe measures at 0.46, just within the normal range. The left parietal lobe is at 0.34. The right to left difference is statistically significant and is essentially in the area of the angular gyrus, which in this right-handed individual would be expected to have effects of impairment of word finding and calculation ability. The right occipital lobe is at 0.52. The left occipital lobe measures at 0.36, which is low. The right to left difference here is statistically significant. This might be expected to result in some impairment of processing of visual information arising on the right side of the body. The right temporal lobe is at 0.48 and within normal range. The left temporal lobe is at 0.41, just within the normal range for someone of this age, despite the relatively good numbers for the splenium of the corpus callosum. The right uncinate fasciculus measures at 0.54 and the left uncinate fasciculus measures at 0.33. The right to left difference is not statistically significant because of variability of the left side. The right arcuate fasciculus is at 0.28 and the left arcuate fasciculus is at 0.28. These are both low numbers and would be consistent with problems with conversational speech affecting primarily prosody or flow of speech as to the right side and more general conversational speech functions as to the left side in this right-handed individual. The right hippocampal cingulum is at 0.32, and that is moderately low. The left hippocampal cingulum is at 0.29, which is also moderately low. The right to left difference is not statistically significant. Overall, these are moderately low numbers and may reflect problems with attention. The right fimbria of the fornix and stria terminalis is at 0.60, within the normal range. The left fimbria of the fornix and stria terminalis is at 0.49, within the normal range. The anterior fornix in the area of the pillars is at 0.37. The posterior fornix at the level of the crus is at 0.24. Particularly for the posterior

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fornix this is a low number and the anterior to posterior difference is statistically significant and this would be expected to have effects of impairment of new memory formation. The right middle cerebellar peduncle measures at 0.60 and the left middle cerebellar peduncle is at 0.77. This is a low number for the right middle cerebellar peduncle and the right to left difference is statistically significant. Impairment for the right middle cerebellar peduncle would be expected to have the effects of some vertigo, problems with balance, sometimes some auditory processing and smooth pursuit motions problems. The right medial lemniscus is at 0.52. The left medial lemniscus is at 0.42. The right to left difference is not statistically significant. Overall, these are moderately low numbers. The medial lemniscus is a general sensory tract and may reflect impairment in the mid-brain area because of this location of abnormality. These would impact functions such as eye movement, convergence, and the underlying symptoms such as photophobia.

FRACTIONAL ANISOTROPY IMPRESSION: Low numbers for the frontal lobe bilaterally, at the stem of the white matter base for the superior, middle and inferior frontal gyri with expected effects of impairment as to multistep planning, map-based planning and emotional control release functions. Low number for the left parietal lobe in the area of the angular gyrus with expected effects on this right-handed individual for problems with word finding and calculation ability. Losses in the left occipital lobe which impair processing of visual information arising on the right side of the body. Low numbers for the uncinate fasciculus and inferior frontal occipital fasciculus may reflect impairments such as flattening of affect and loss of emotional drive and impairment of some visual recognition phenomena. However, given the variability, it is not clearly statistically significant as to the contralateral side. The arcuate fasciculus bilaterally with low numbers which will affect aspects of conversational speech. Low numbers for the hippocampal cingulum which will have expected effects on attention. Low numbers for the posterior fornix with expected problems with new memory formation. Low number for the right middle cerebellar peduncle with expected effects such as vertigo, balance problems, impairment of smooth pursuit motions and some types of auditory processing. A somewhat low number for the left medial lemniscus which would expect to be associated with some midbrain function impairment such as problems with eye movement, pupillary accommodation, convergence and may be associated with symptoms such as photophobia. Overall, these findings demonstrate multiple appearance with effects on cognition, emotional behavior and neurologic functions. The degree of abnormality appreciated in the images would be consistent with clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

FA Measurements and Statistical Calculations:

These images demonstrate data collection and analysis in addition to the measured VOI's for the medial lemniscus and the full data set. A full set of VOI measures appears in the image DICOM data file.

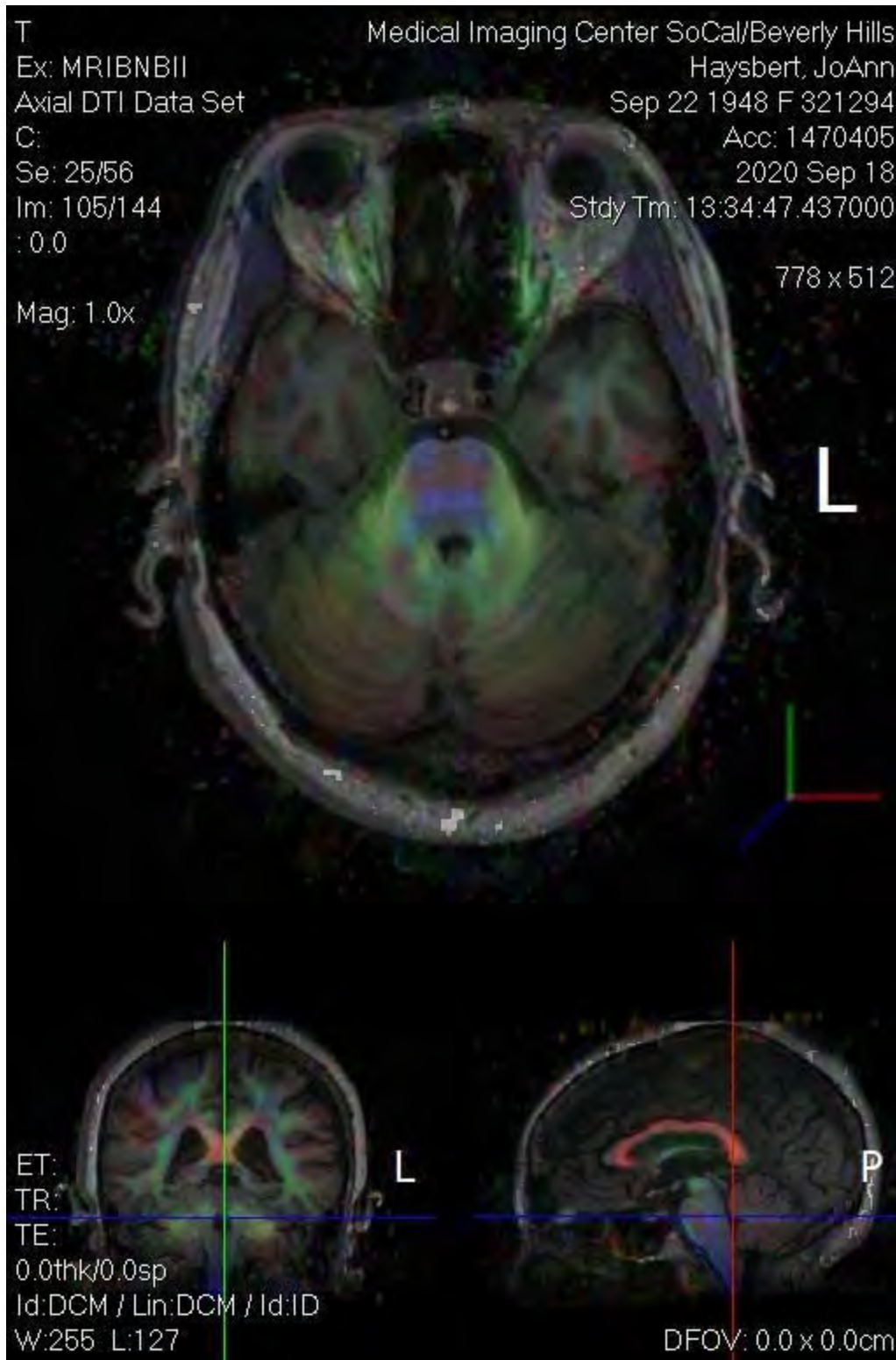
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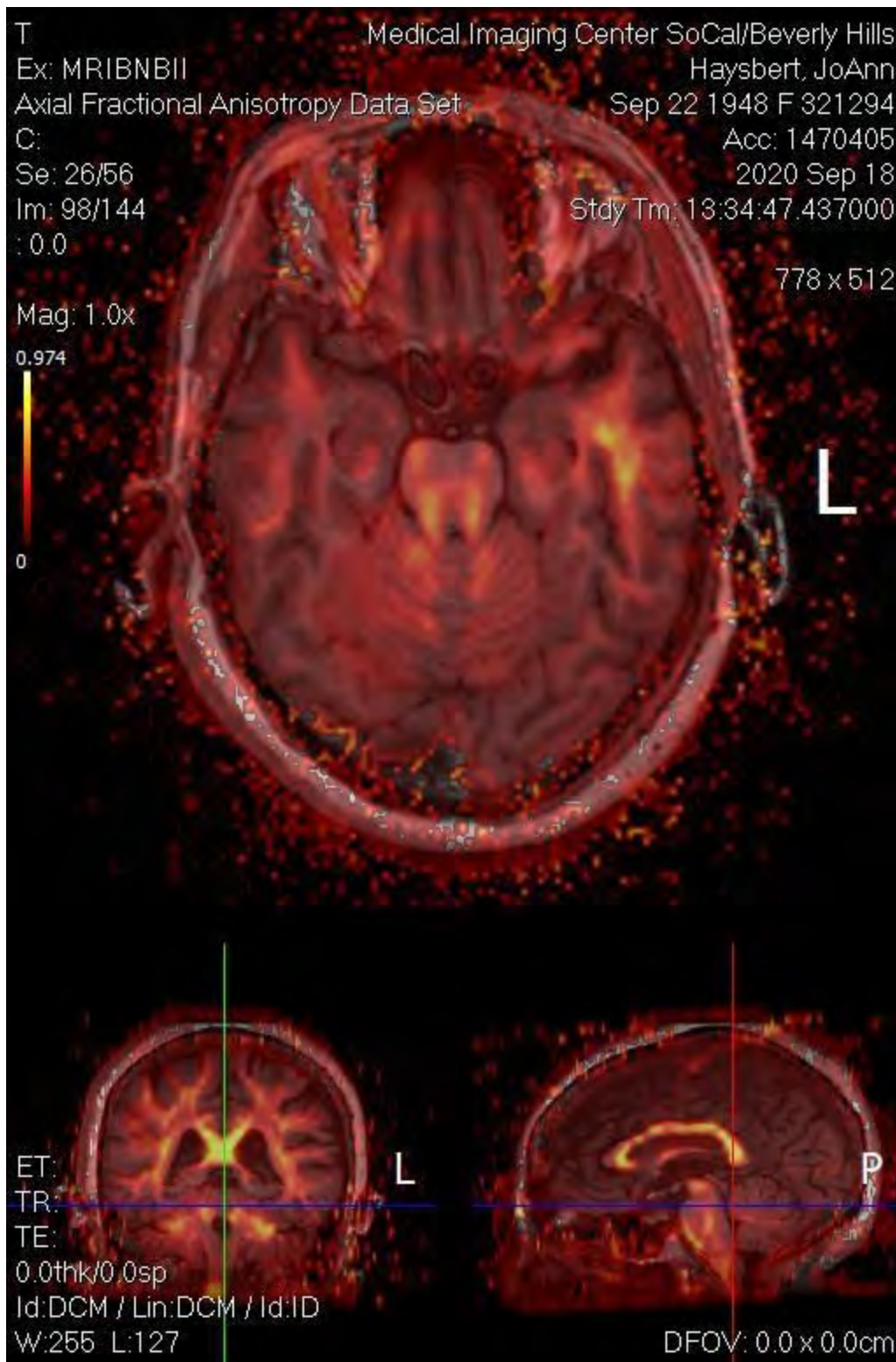
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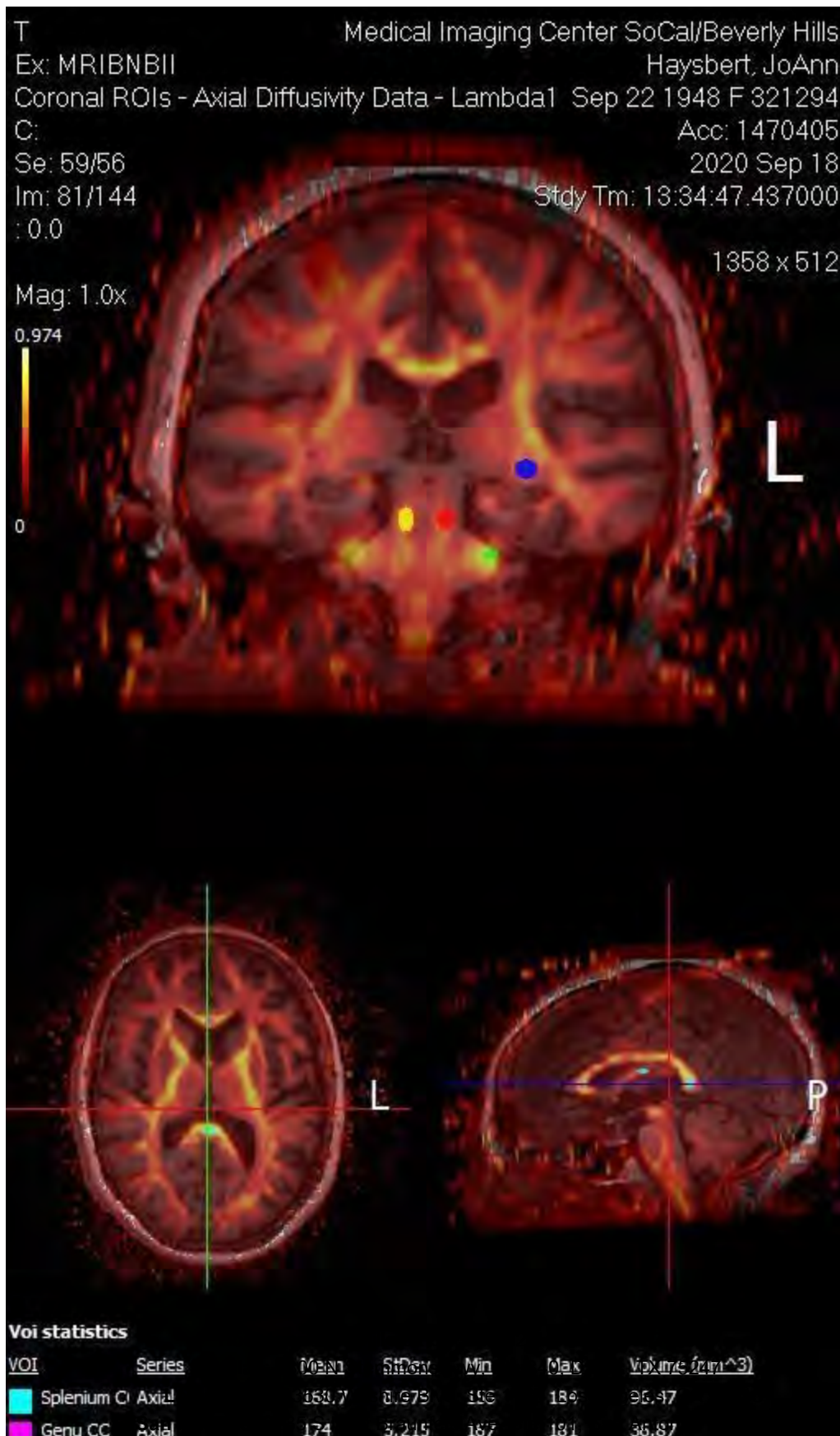



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Voi statistics						
VOI	Series	Mean	StDev	Min	Max	Volume (mm^3)
	Splenium CI Axial	168.7	8.979	156	184	96.47
	Genu CC Axial	174	5.215	167	181	36.87
	R Corona r1 Axial	132.2	6.459	123	142	117.5
	L Corona r2 Axial	122.4	2.066	118	124	72.6
	R Superior Axial	117.1	8.544	102	127	92.98
	L Superior f Axial	109.3	11.96	94	131	129.9
	R Parietal L Axial	120.8	7.581	108	135	115
	L Parietal L1 Axial	113.1	5.154	102	121	166.2
	R Occipital Axial	144.6	5.457	137	152	71.39
	L Occipital l Axial	124.3	16.5	108	160	81.62
	R Temporal Axial	142.6	7.648	129	150	110.1
	L Temporal Axial	111.4	11.57	95	129	81.62
	R Uncinate Axial	135.9	5.54	125	143	76.5
	L Uncinate Axial	109.7	8.062	98	122	101.4
	R Arcuate f Axial	97.5	2.345	96	102	120.5
	L Arcuate F Axial	117	12.84	98	135	98.48
	R Hippocam Axial	112.9	6.342	103	126	144.7
	L Hippocam Axial	111.1	5.092	102	120	108.1
	R Fimbria F Axial	138	15.32	114	156	73.25
	L Fimbria Fr Axial	126.5	27.09	85	180	117.9
ET:	Ant Fornix Axial	251.1	36.93	206	322	57.56
TP:	Post Fornix Axial	282.3	59.58	200	363	82
TE:	R Mid Cereb Axial	120	11.37	105	134	88.36
0.0thk/0.0sp	L Mid Cereb Axial	131.6	6.762	125	143	78.16
Id:DCM / Lp:DCM / Id:ID	R Medial Lr Axial	166.5	12.7	145	184	117.2
W:255 / L:127	L Medial Lr Axial	189.7	20.12	142	210	109.9

DEGV: 0.0 x 0.0cm

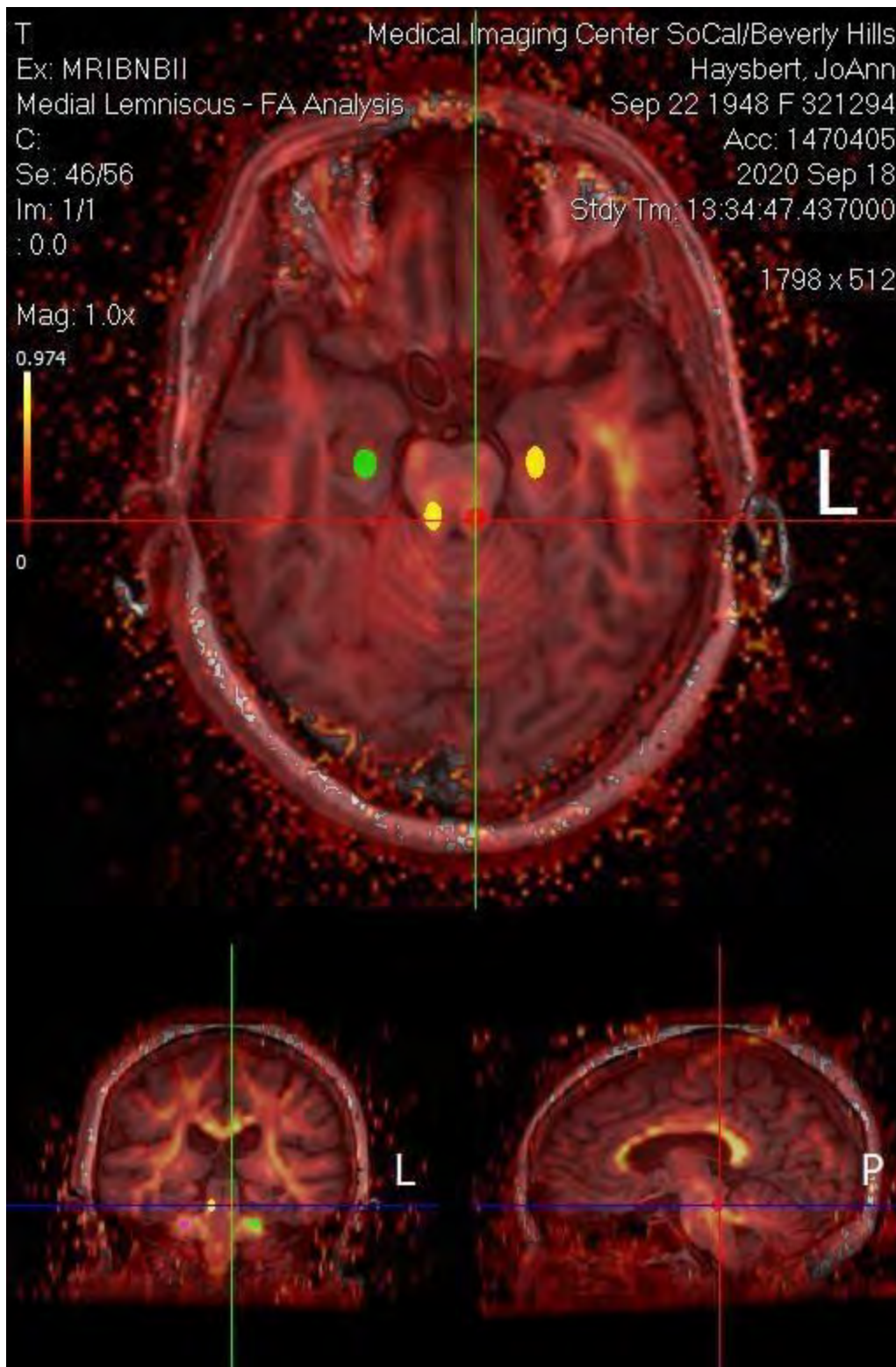
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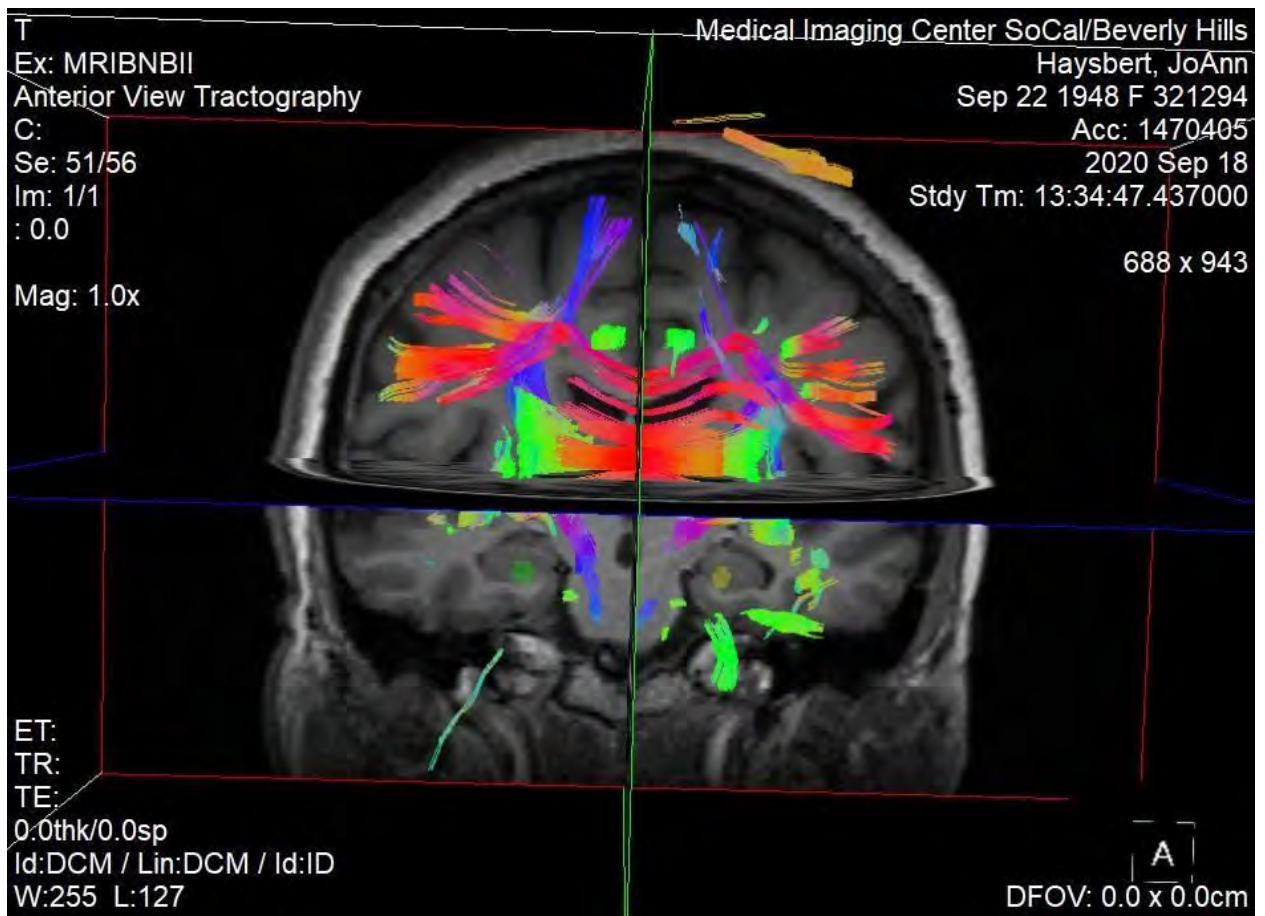
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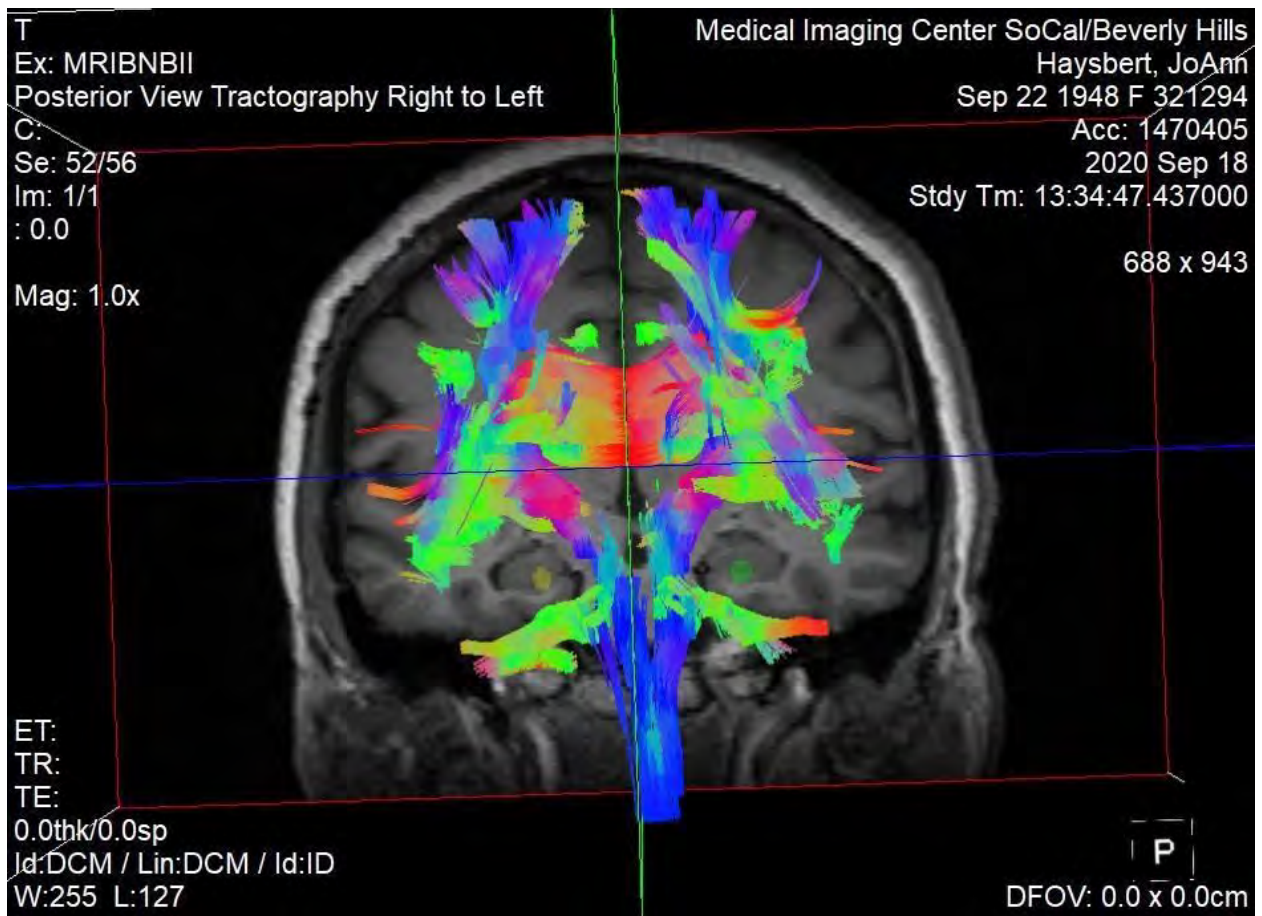
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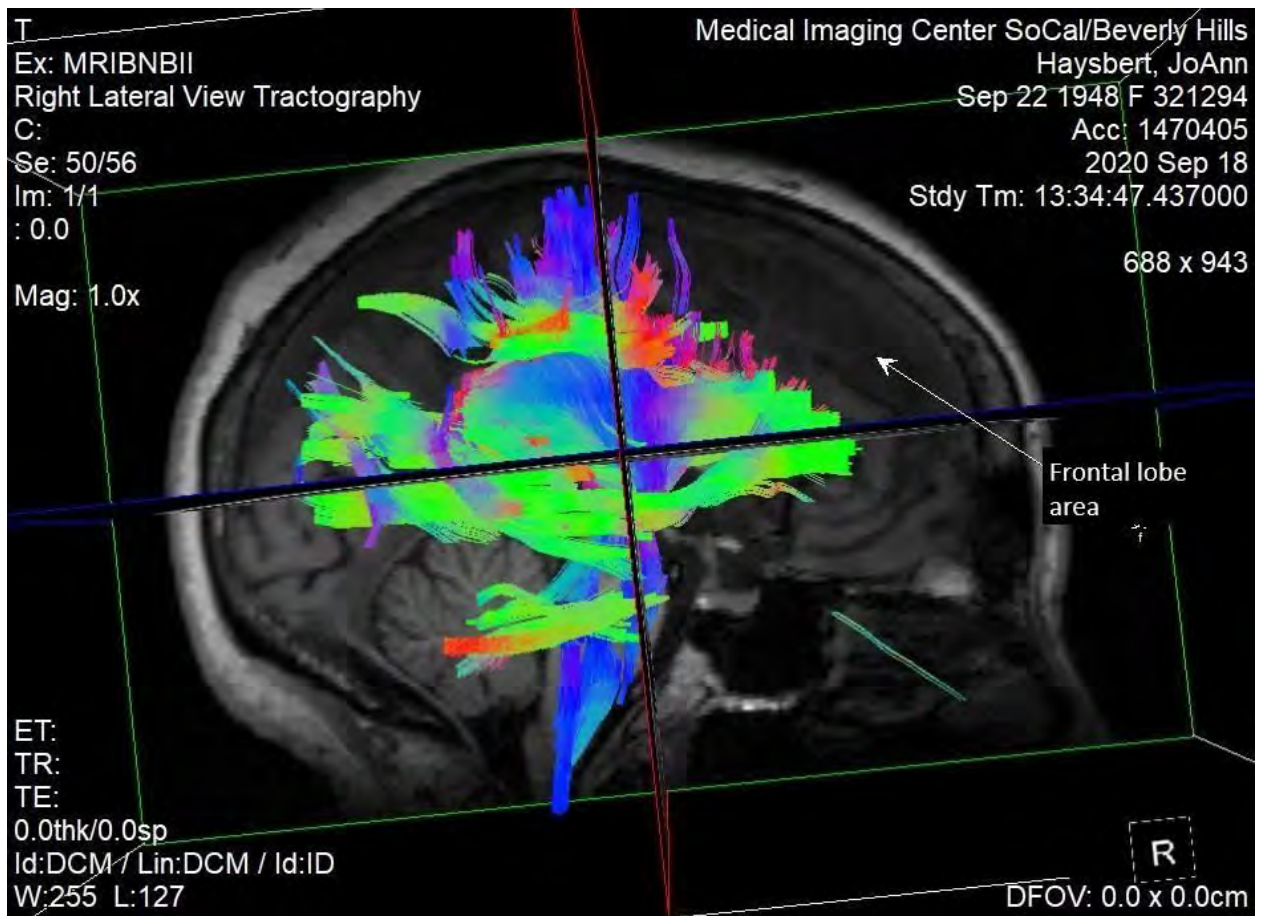
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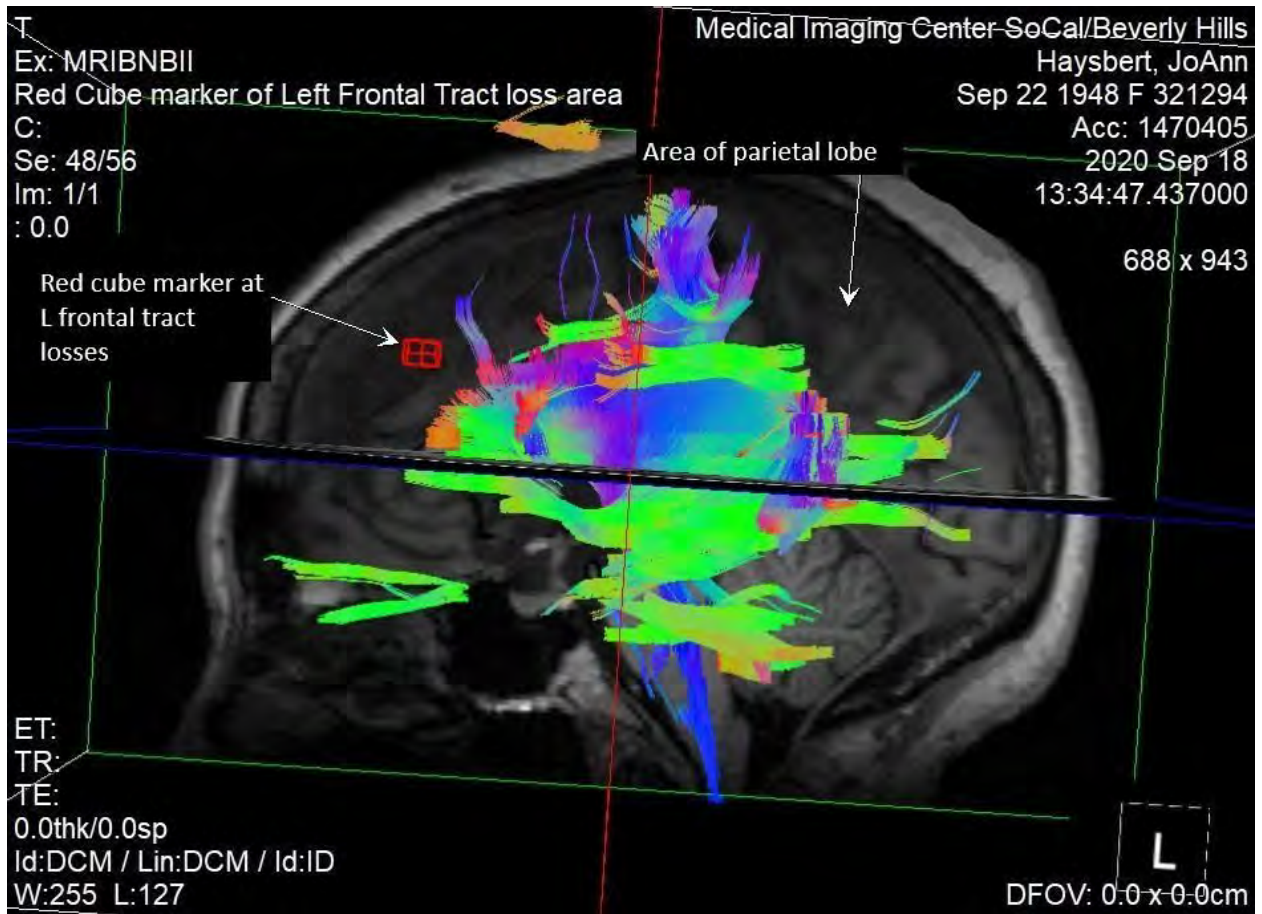
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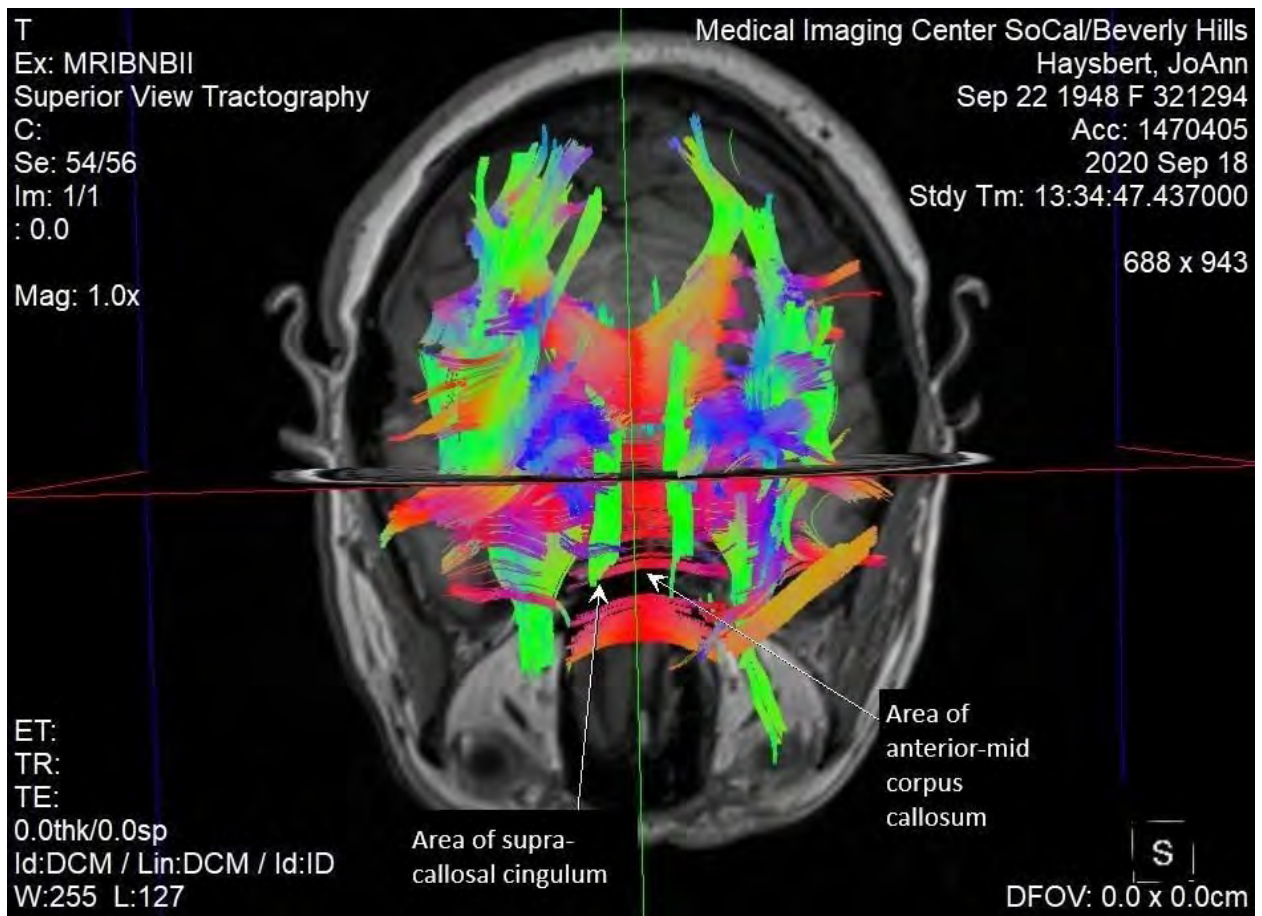
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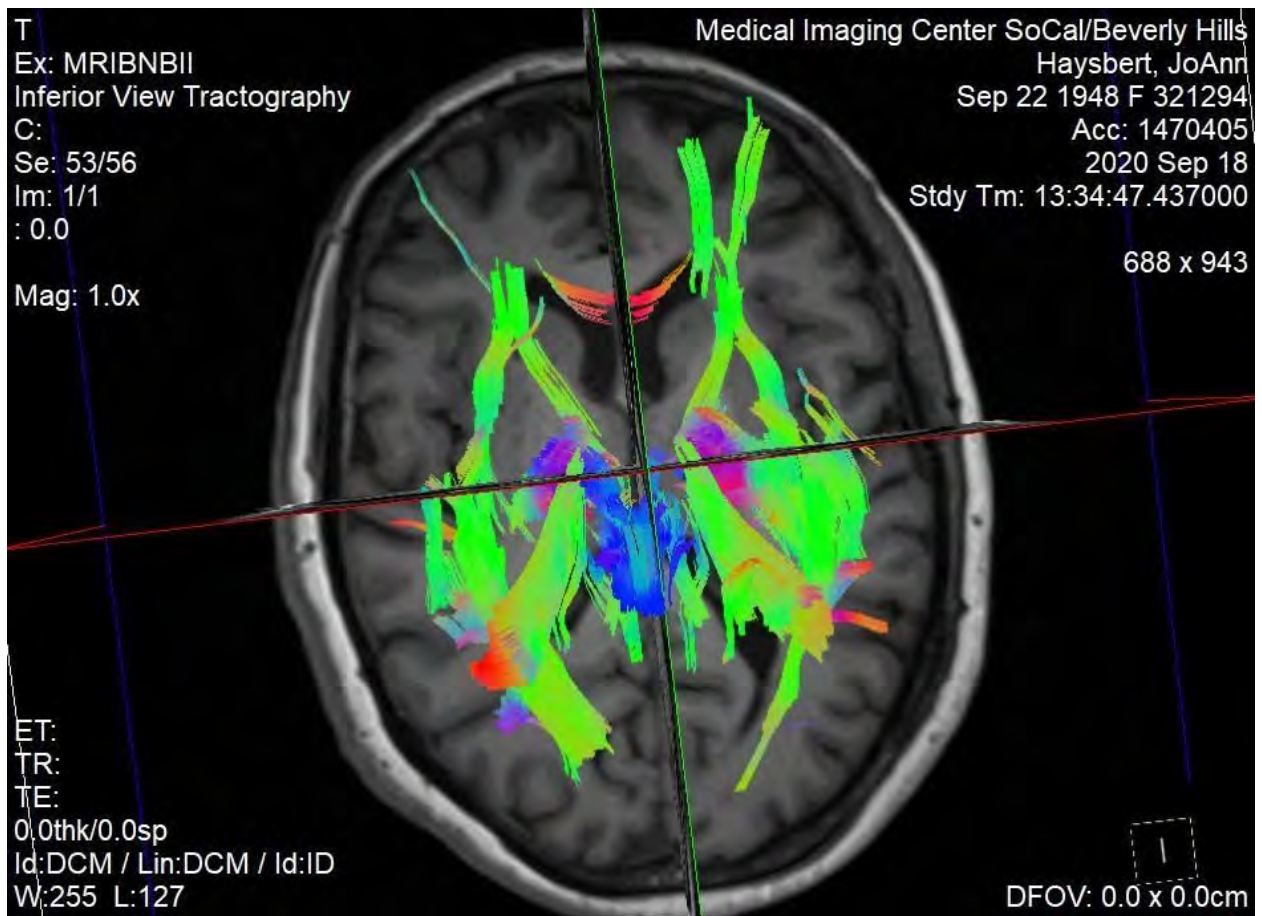
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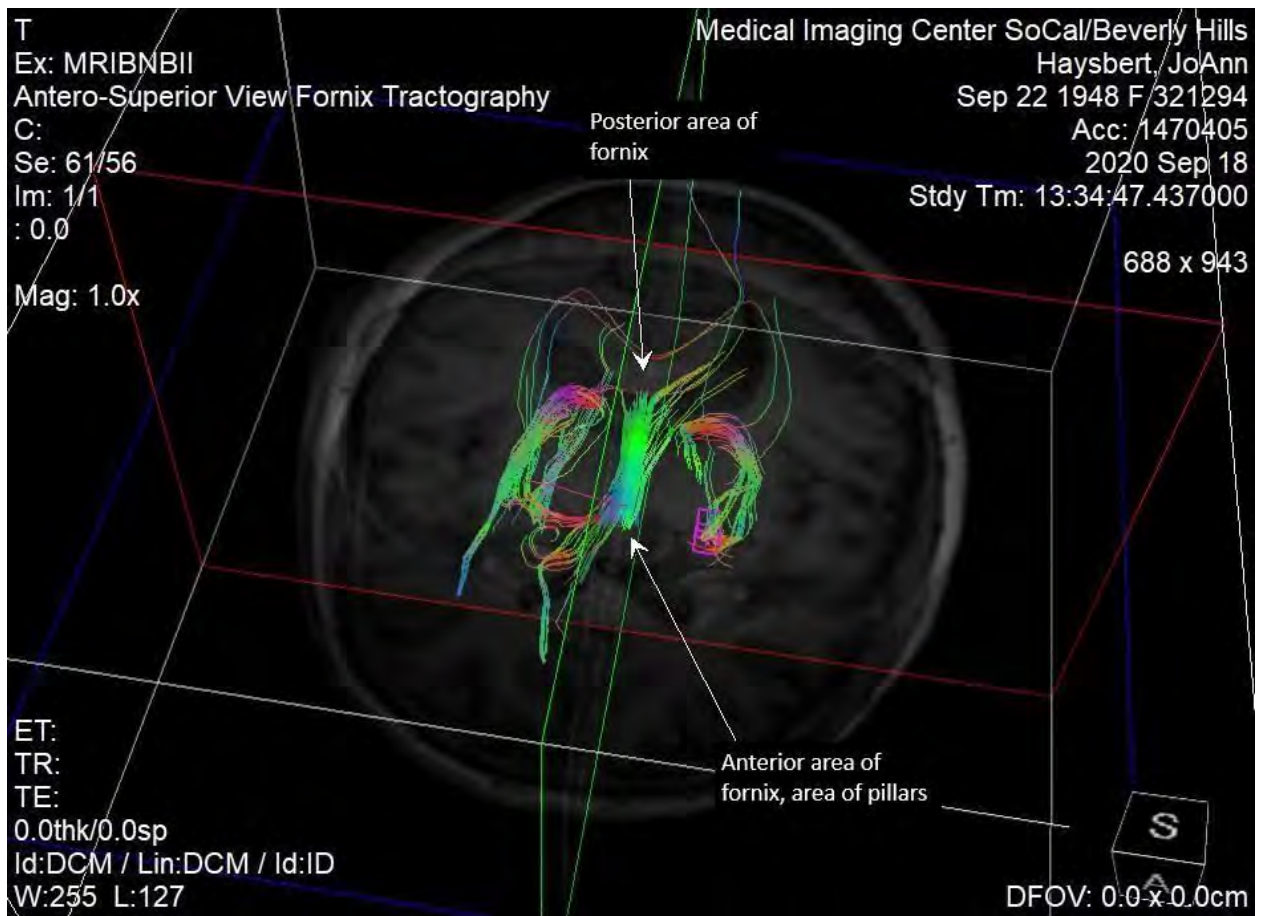
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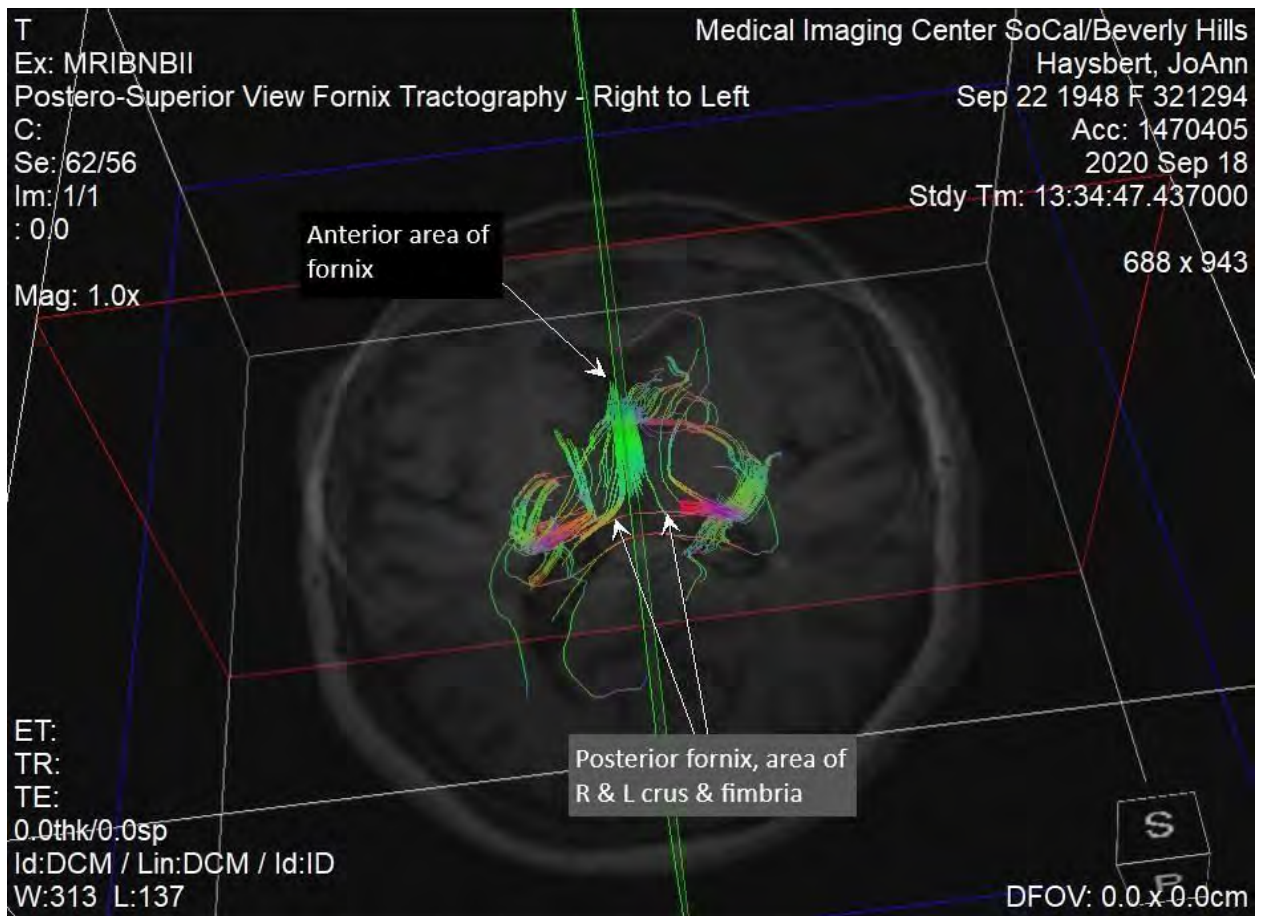
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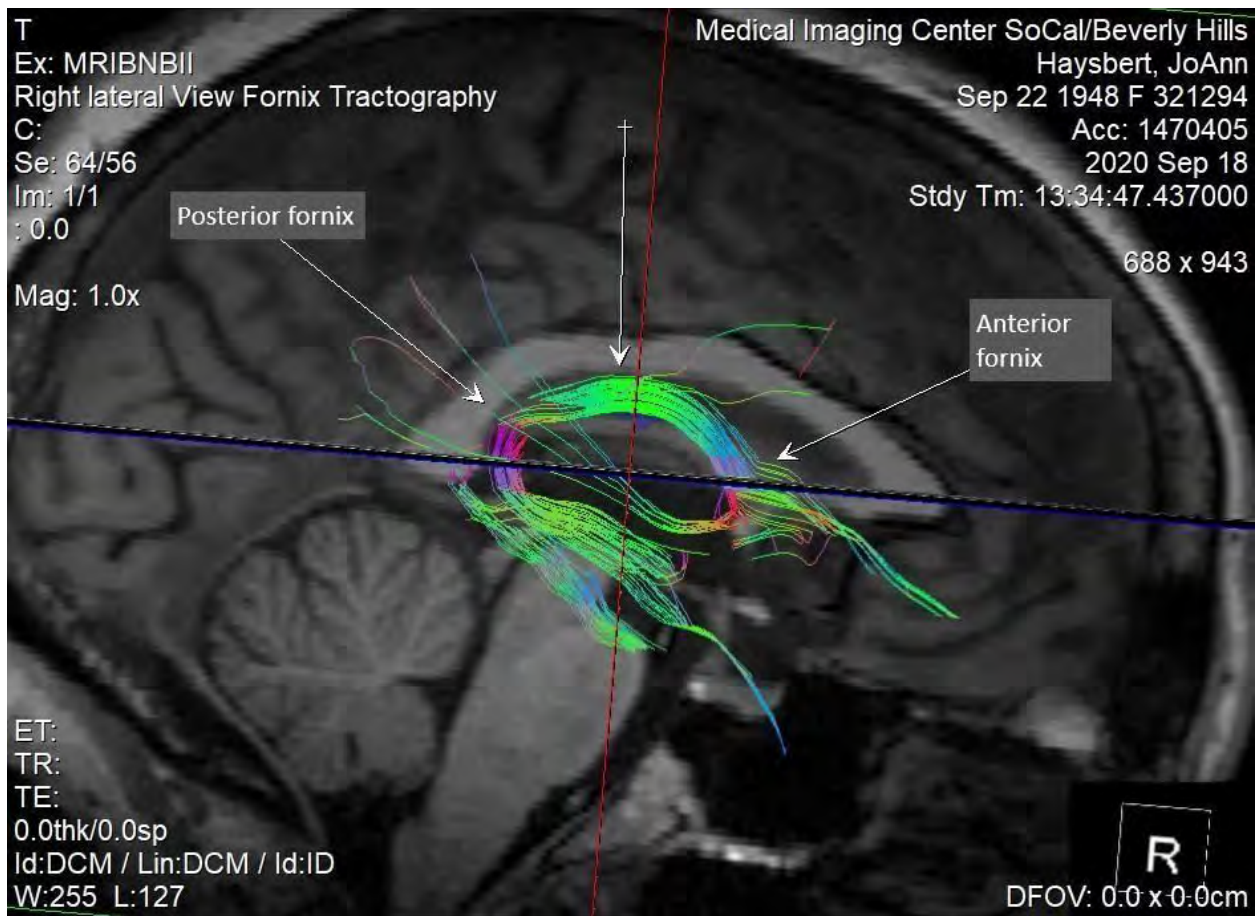
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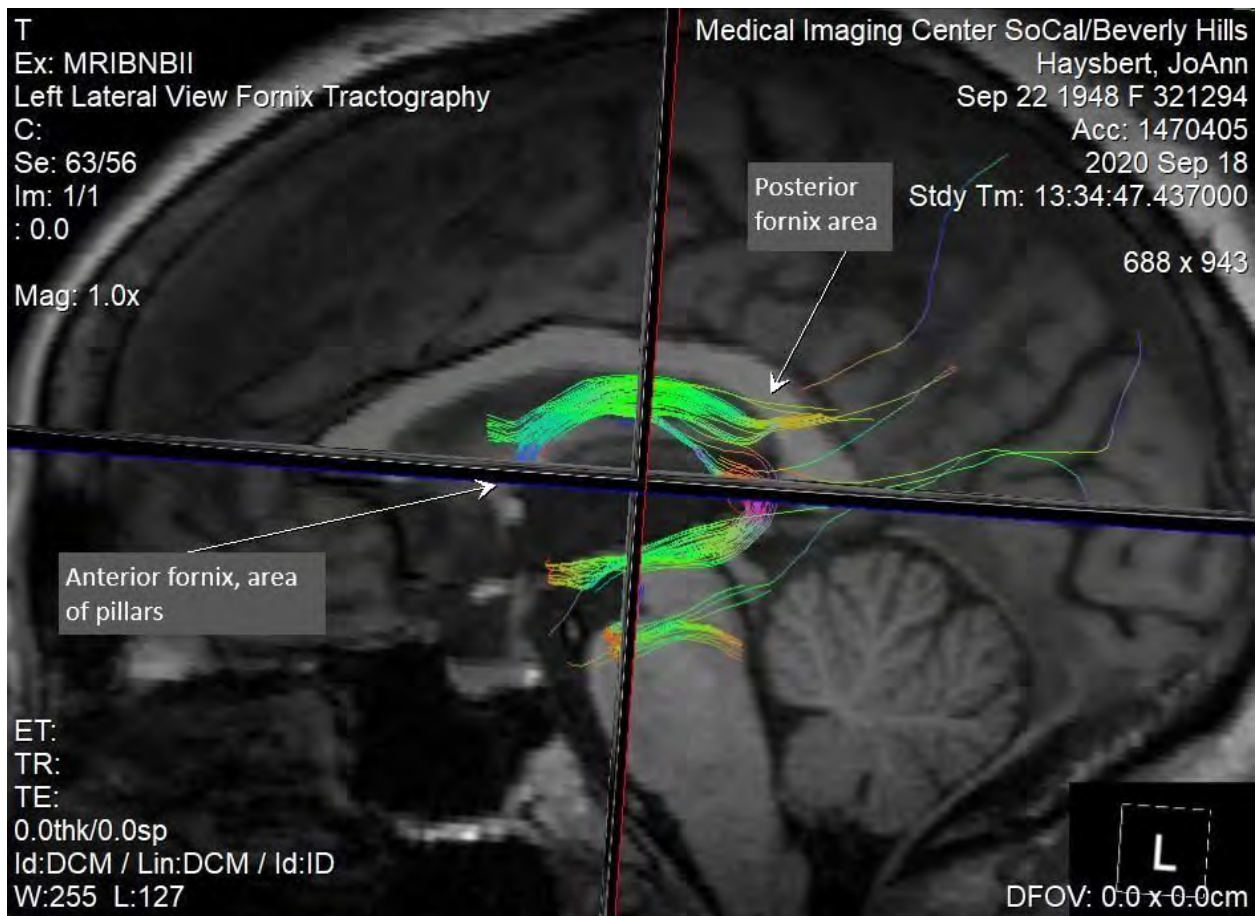
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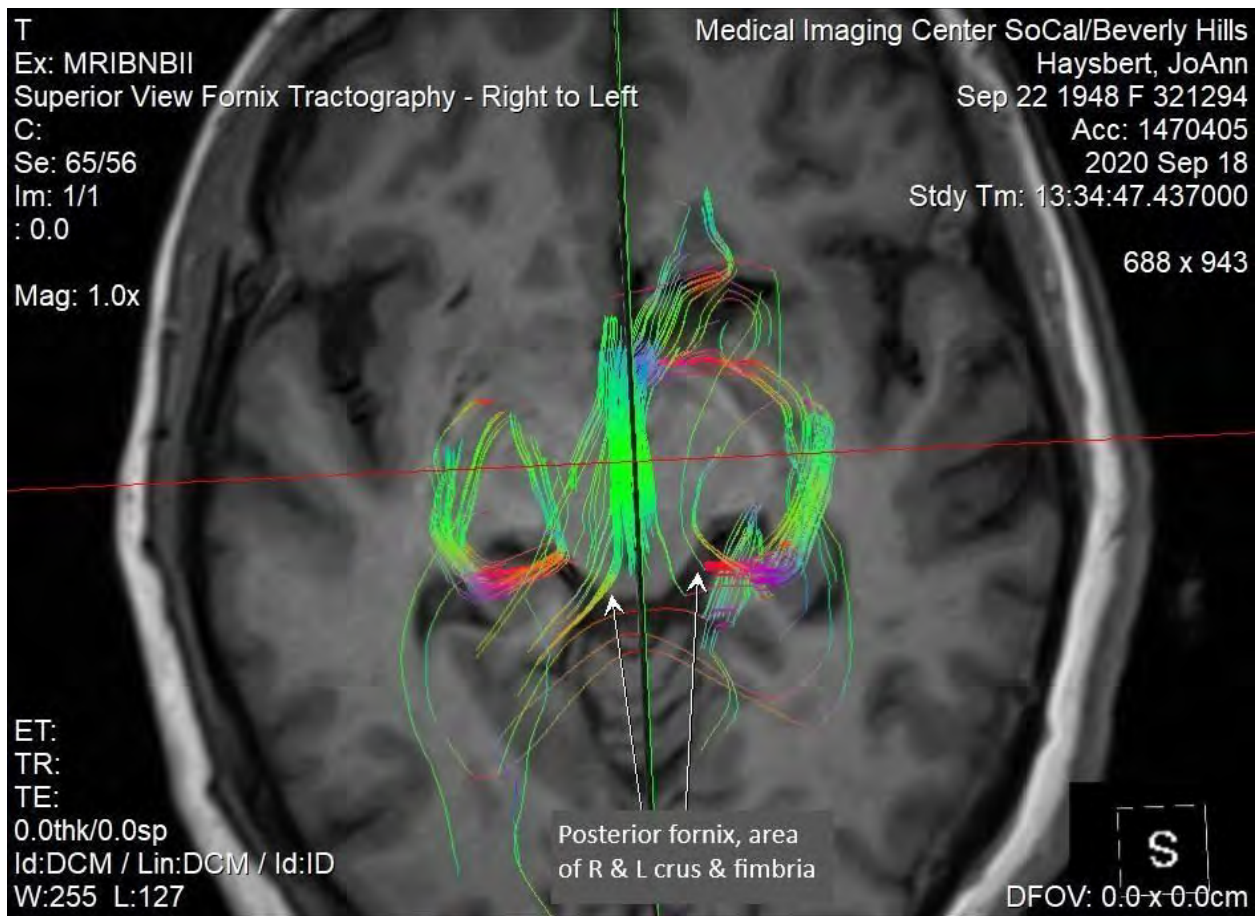
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Routine Brain and SWI MRI FINDINGS: These images demonstrate the brain anatomy at 3-Tesla and using a number of image sequences and image planes. The brain images are obtained in coronal, axial, and sagittal planes and include the following the coronal T2 MP GRE HEMO and or SWI (SWAN) sequence for micro bleeds, sagittal T2 FLAIR, axial T2 FLAIR, axial T2, axial T1 MP RAGE, coronal T2 FLAIR FS, as well as a variety of analytical evaluations including susceptibility-weighted imaging (SWI) and maximum intensity projection SWI in the coronal plane. Susceptibility weighted imaging accentuates the effect of elemental iron deposited in a brain location by bleeding or “micro-hemorrhages” in the past.

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IMAGE FINDINGS: The routine brain imaging shows generally normal gyral-to-sulcal proportions for age and just some very slight generalized atrophy. The ventricles are generally normal in size, shape and position, with just some slight dilatation, particularly in the posterior occipital horn on the left side, which may reflect some tissue loss such as an atrophy process, perhaps possibly prior stroke or congenital right to left difference. The cerebellar tonsils are normal in position. The pineal region generally is normal. The FLAIR imaging demonstrates extensive FLAIR abnormalities which are expected for age. These are of unclear clinical significance. They are distributed bilaterally through posterior parietal lobe, occipital, and frontal lobes. These may reflect microvascular abnormalities, infectious abnormalities, they can reflect trauma. The general and diffuse distribution tends to suggest chronic, perhaps asymptomatic basis. The clinical significance is unclear. The susceptibility-weighted imaging does not demonstrate any clear areas of microhemorrhage. There is no mass effect or midline shift. There are no extra axial collections of fluid or blood. The sella and parasellar regions are normal. The posterior fossa is normal. The mastoid cells are clear. The sinuses and orbits are normal.

IMPRESSION and OVERALL IMPRESSION: Overall impression is generally normal routine brain imaging with some expansion of the left occipital horn of the lateral ventricle which may reflect some prior volume loss. Extensive FLAIR abnormalities of unclear clinical significance, not specifically related in location to the areas of fractional anisotropy losses. The fractional anisotropy analysis and the tractographic analysis both demonstrate problems in the frontal lobe associated with the white matter stem of the superior, middle and inferior frontal gyri with expected effects of impairment of multistep planning, map-based planning and emotional control release functions. Both demonstrate problems in the angular gyrus in the left parietal lobe which for this right-handed individual would be expected to have the effect of impairment of word finding and calculation ability. Losses appreciated both in both evaluations with regard to the arcuate fasciculus which can affect prosody or flow of speech as well as the other aspects of speech processing. There are losses in the fornix which would be expected to have the effect of impairment of new memory formation. The tractographic analysis additionally demonstrates problems bilaterally in the supra-callosal cingulum which would have the expected effects of increased anxiety and depression. The fractional anisotropy analysis additionally demonstrates some low numbers for the occipital lobe on the left which may reflect impairment of processing of visual information arising on the right side of the body. Some low numbers for the left uncinate fasciculus and inferior frontal occipital fasciculus, not quite statistically significant, but may reflect problems such as flattening of affect and loss of emotional drive and some types of visual recognition phenomena. There are low numbers in the left hippocampal cingulum and to a lesser extent in the right hippocampal cingulum which may reflect problems with attention, and some low numbers on the medial lemniscus, particularly on the left side, which may reflect impairments associated with the midbrain such as difficulties with pupillary accommodation, eye movement, convergence, and possible associated with symptoms such as photophobia. Overall, these findings demonstrate

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multiple abnormalities which would be expected to have effects on cognition, emotional behavior and neurologic functions as detailed above. The severity of the abnormalities appreciated in the imaging would be expected to have clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

Signed:



Aaron Filler, MD, PhD
Neurography Institute Medical Associates

Diplomate, American Board
of Neurological Surgery

Fellow of the Royal College of
Surgeons of England

Fellow of the Intercollegiate Board in
Surgical Neurology of England,
Ireland, Edinburgh & Glasgow

Fellowship in Complex Spinal Surgery
- UCLA

Fellowship in Peripheral Nerve
Surgery-
LSU

Director, Institute for Nerve

Medicine, Santa Monica, CA

Director, Center for Advanced
Spinal Neurosurgery, Santa
Monica, CA

Life Care Plan

Haysbert, JoAnn

Prepared and Reviewed by Huma Haider, MD

Medical Director, National Brain Injury Institute

Board Certified in Neurocritical Care through United Council of Neurologic Subspecialties (UCNS)

Board Certified in Headache Medicine through United Council of Neurologic Subspecialties (UCNS)

Board Certified in Headache Medicine through American Board of Headache Medicine (ABHM)

Board Certified in Internal Medicine through American Board of Internal Medicine (ABIM)

Board Certified in Anesthesiology through American Board of Anesthesiology (ABA)

Certified Life Care Planner (CLCP)

Masters in General Psychology

www.nationalbii.com

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LIFE CARE PLAN

Name: Haysbert, JoAnn
Date of Birth: 09/22/1948
MR#: HJ50647
Date of Injury: 05/23/2018
Date Prepared: 06/22/2021

TABLE OF CONTENTS

TABLE OF CONTENTS	2
OVERVIEW	5
LIFE CARE PLAN	5
COST ANALYSIS SUMMARY	5
DR. HUMA HAIDER'S BIOGRAPHY	6
OBJECTIVES OF LIFE CARE PLAN FOR Dr. HAYSBERT	8
CLINICAL INTERVIEW	8
HISTORY OF PRESENT ILLNESS	8
MEDICAL HISTORY PRIOR TO INJURY	14
SURGICAL HISTORY PRIOR TO INJURY	14
MEDICAL HISTORY AFTER INJURY	14
SURGICAL AND PROCEDURAL HISTORY AFTER TO INJURY	15
CURRENT MEDICATIONS	15
ALLERGIES	15
EDUCATIONAL HISTORY	15
SOCIAL HISTORY	15
FAMILY HISTORY	15
BACKGROUND INFORMATION	15
REVIEW OF SYSTEMS	17
PHYSICAL EXAMINATION	17
SUMMARIZED MEDICAL RECORDS	18
SOURCES	18

CHRONOLOGY OF CARE	18
CHRONOLOGICAL IMAGING/TEST RESULTS	23
IMPACT OF INJURY	25
IMPACT ON FUTURE EARNINGS	25
IMPACT OF INJURIES ON ACTIVITIES OF DAILY LIVING [ADLs] AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING [IADLs].	27
IMPACT OF INJURIES ON COMPLEX TASKS	42
IMPACT ON FAMILY WELL-BEING	42
LONG-TERM COMPLICATIONS OF TRAUMATIC BRAIN INJURY	42
LEADING IMPRESSIONS	44
DIAGNOSES	44
DISABILITIES POST-INJURY	45
LIFE EXPECTANCY	46
FUTURE MEDICAL REQUIREMENTS	46
SUMMARY OF COSTS	47
EVALUATIONS	48
TREATMENTS AND THERAPIES	48
FUTURE DIAGNOSTICS	49
MEDICATIONS	49
LABORATORY STUDIES	50
REHABILITATION SERVICES	50
MEDICAL EQUIPMENT AND SUPPLIES	50
HOME ALTERATIONS AND FURNISHINGS	51
PERSONAL CARE AND HOME SERVICES	51
TRANSPORTATION	51
THERAPEUTIC SERVICES	52
VOCATIONAL EQUIPMENT	52
COST DATA/ VENDOR SOURCES	53
VENDOR SOURCES	53
EVALUATIONS	54
TREATMENTS AND THERAPIES	55
FUTURE DIAGNOSTICS	56
MEDICATIONS	57
LABORATORY STUDIES	59

REHABILITATION SERVICES	60
MEDICAL EQUIPMENT AND SUPPLIES	61
HOME ALTERATIONS AND FURNISHINGS	62
PERSONAL CARE AND HOME SERVICES	63
TRANSPORTATION	63
THERAPEUTIC SERVICES	64
VOCATIONAL EQUIPMENT	64
COST ANALYSIS	66
VARIABLES	66
PARAMETERS CONSIDERED	66
SUMMARY RESTATEMENT OF LEADING IMPRESSIONS	66
EVALUATIONS	68
TREATMENTS AND THERAPIES	69
FUTURE DIAGNOSTICS	71
MEDICATIONS	72
LABORATORY STUDIES	75
REHABILITATION SERVICES	77
MEDICAL EQUIPMENT AND SUPPLIES	80
HOME ALTERATIONS AND FURNISHINGS	82
PERSONAL CARE AND HOME SERVICES	84
TRANSPORTATION	85
THERAPEUTIC SERVICES	87
VOCATIONAL EQUIPMENT	88
SUMMARY	90
REFERENCES AND CONSULTED MATERIALS	93

OVERVIEW

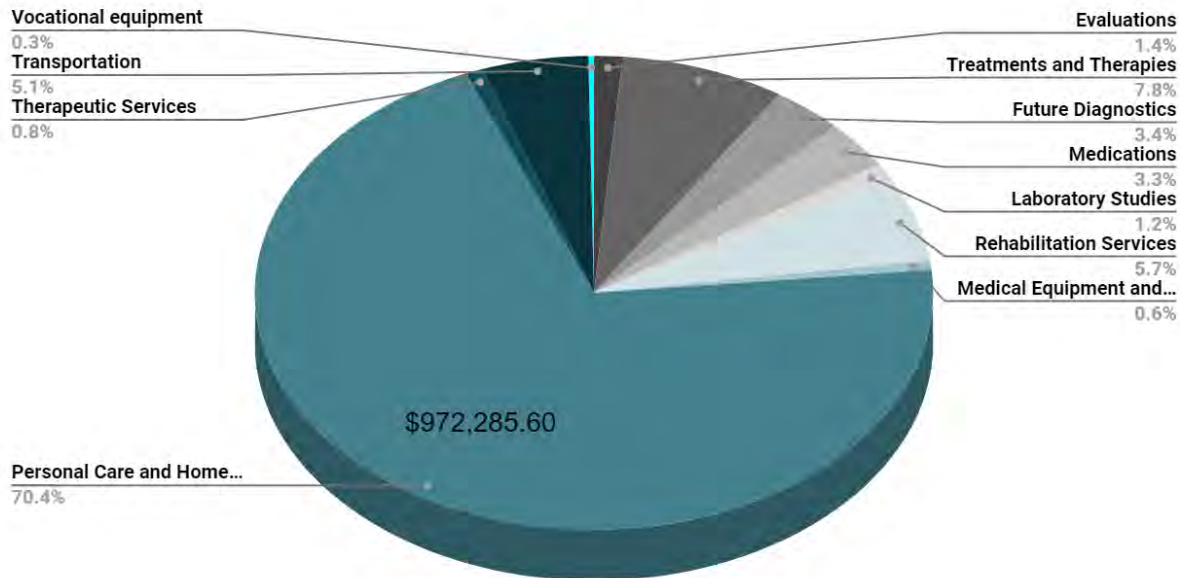
LIFE CARE PLAN

A life care plan is a document that is based upon the current published standards for practice, comprehensive assessment, data analysis and research, which is used to provide an organized and concise plan for the current and future needs of Dr. Haysbert. Life care plans are created for individuals who have experienced some type of catastrophic injury or have chronic health care needs. ⁷

COST ANALYSIS SUMMARY

Future Medical Requirements for Dr. Haysbert		
Category	Cost	Percentage of Total
Evaluations	\$18,733.40	1.36%
Treatments and Therapies	\$108,301.20	7.84%
Future Diagnostics	\$47,508.28	3.44%
Medications	\$45,073.25	3.26%
Laboratory Studies	\$16,769.70	1.21%
Rehabilitation Services	\$78,988.80	5.72%
Medical Equipment and Supplies	\$8,000.87	0.58%
Home Alterations and Furnishings	\$1,054.77	0.08%
Personal Care and Home Services	\$972,285.60	70.35%
Therapeutic Services	\$11,580.00	0.84%
Transportation	\$70,012.80	5.07%
Vocational equipment	\$3,693.87	0.27%
TOTAL	\$1,382,002.54	100.00%

SUMMARY COSTS



DR. HUMA HAIDER'S BIOGRAPHY

- Board Certified in Neurological Critical Care through United Council of Neurological Subspecialties (UCNS)
- Board Certified in Headache Medicine through American Board of Headache Medicine (ABHM)
- Board Certified in Headache Medicine through United Council of Neurological Subspecialties (UCNS)
- Board Certified in Anesthesiology through American Board of Anesthesiology (ABA)
- Board Certified in Internal Medicine through American Board of Internal Medicine (ABIM)
- Certified Life Care Planner (CLCP)

Life Care Plan for Haysbert, JoAnn | 6 of 100

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- Certified Independent Medical Examiner (CIME) through American Board of Independent Medical Examiners (ABIME)
- Master's in General Psychology
- Member of American Psychological Association (APA)
- Member of North American Brain Injury Society
- Member of American Headache Society
- Credentialed ImPact Consultant
- ACLS Certified

PROFESSIONAL EXPERIENCE

NATIONAL BRAIN INJURY INSTITUTE

Medical Director, March 2018 – Present

Evaluation and Management of Traumatic Brain Injury
Houston, TX

TEXAS BRAIN CENTER

Medical Director, Jan 2016 – March 2018

Concussion and Traumatic Brain injury Program
Houston, TX

ADVANCED DIAGNOSTICS HOSPITALS AND CLINICS

Attending Anesthesiologist, Oct 2015 – March 2018
Houston, TX

MEMORIAL HERMANN HOSPITAL, SOUTHWEST

Attending Neuro Intensivist, Aug 2013 - October 2018
Houston, TX

MEMORIAL HERMANN HOSPITAL, TEXAS MEDICAL CENTER

Attending Neuro Intensivist, Aug 2013 - Dec 2015
Houston, TX

MEMORIAL HERMANN HOSPITAL, TEXAS MEDICAL CENTER

Assistant Professor of Anesthesiology, Aug 2013 - Dec 2015
Houston, TX

OBJECTIVES OF LIFE CARE PLAN FOR Dr. HAYSBERT

This life care plan document is created with the patient at the center and is aptly named: Person Centered Planning (PCP). PCP supports personal independence to the extent possible based upon comprehensive assessments by trained and credential providers under the NBII network. Moreover, this plan also endeavors to provide for personal freedom of movement within the community in a supported and safe manner, as well as aims to account for appropriate services and support based upon individual needs. Also integral to personal well-being, and as determined required by legal mandates, this plan addresses the needs of a safe, accessible home in a residential setting with adequate privacy. Holistic supports discoursed within this document also delve into vocational and meaningful activity to provide community integration and a sense of self-efficacy. Summarily, these points will be met with the following information central to planning:

- Dr. Haysbert suffered a fall and blow to the head on May 23, 2018. As a result, Dr. Haysbert is suffering from physical, neurocognitive, and psychosocial disabilities.
- This life care plan is meant to aid Dr. Haysbert in diminishing her physical and psychological pain and suffering by providing a basis on how to treat these ailments.
- Traumatic brain injury and/or orthopedic injuries have an increased risk of persistent and meaningful impairments, as well as functional limitations. It has been demonstrated that head trauma with concussion or in the absence of concussion can result in neurological impairments later in life.
- Dr. Haysbert's unique circumstances and condition have been evaluated and used to make recommendations and predictions as to prevent future complications, and to maintain the best possible quality of life despite her current injury.

I make these statements with a reasonable degree of medical probability and on a more probable than not basis based upon education and experience, and caring for individuals with various disorders, including TBI.

CLINICAL INTERVIEW

HISTORY OF PRESENT ILLNESS

On May 23, 2018, Dr. Haysbert arrived at the Outback Steakhouse with plans to have dinner with her daughter. Upon entering the restaurant, Dr. Haysbert asked the hostess where the restrooms were located. The hostess pointed in the direction of the restrooms. Dr. Haysbert took 1-2 steps forward towards the restroom, when suddenly, she fell on her left side, having been

Life Care Plan for Haysbert, JoAnn | 8 of 100

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unable to gain traction on a slippery floor. Her head slammed into the floor, and she lost consciousness for a few seconds. When she regained consciousness, she saw people around her and was unable to move. She was picked up by three people. Dr. Haysbert was confused and disoriented and unaware of where she was. She started experiencing immediate pain in her left temple. She described feeling as if her head was spinning and felt dizzy and imbalanced. Swelling and bruising of her left temple were noted. Specific left wrist and shoulder pain were described, as well as entire left-sided pain and discomfort. The manager of the restaurant asked her if she should call an ambulance, but Dr. Haysbert told the manager to call her daughter who was still outside the restaurant. Dr. Haysbert's daughter drove her back home, where Dr. Haysbert went to sleep immediately due to the fear of dying. Her daughter iced her left side of her body in an effort to decrease the swelling; however, her swelling and other symptoms persisted. Several days after the fall, Dr. Haysbert sought treatment at an urgent care facility due to ongoing symptoms of headache, dizziness, and vertigo. An x-ray of her left hand was obtained at that visit; no fracture was identified. She was told she had a contusion, and a left-hand splint was placed. She was further instructed to follow up with her primary care provider. Upon this follow up with her PCP, an MRI of the brain was ordered.

- **LOC:** positive; loss of consciousness under 2 minutes.
- **Hit head:** positive.
- **Confusion/disorientation:** positive.
- **Dizziness/Balance:** positive.
- **Nausea/Vomiting:** denied.
- **ER visit info:** transported via personal vehicle, same week.
- **Disposition:** discharged with pain management medications and orders to follow-up with PCP.

The MRI of her brain was obtained on June 4, 2018. Small vessel ischemic disease was noted, but no acute findings. Dr. Haysbert continued to be followed by her primary care physician for annual examinations and management of her chronic medical conditions.

Dr. Haysbert was seen at the National Brain Injury Institute on September 18, 2020 for an initial comprehensive evaluation. To assist in the quantification of her symptom severity, the Rivermead Post-Concussion Symptoms Questionnaire tool was utilized in the form of tick boxes in the related sections. Sections wherein the rating exceeds 'No More of a Problem' are considered abnormal. The following was reported by Dr. Haysbert:

- **Post-traumatic headaches:** On a scale of 1 to 10, Dr. Haysbert reports headaches of 7 or 8/10 in intensity. Headaches recur 1-2 days per week, and last from 2 hours to the entire day. Occasionally stays in bed due to the headaches. Pain is described as

throbbing, pulsating, and stabbing or piercing. Pain is described in the crown of her head, which causes her to feel that her whole head is hurting. No previous history of headaches or migraines reported. Associated symptoms include light sensitivity, sound sensitivity, and dizziness. Alleviating factors include dark, quiet spaces and rest. Light and sound are known exacerbating factors. A warm rag or other ear cover over her left ear decreases her sound exposure, but this has caused her feelings of distress as it has compromised her appearance.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- **Sensitivity to light:** Sensitivity to light is endorsed. She has adapted by minimizing her exposure to bright lights in order to prevent such sensitivity.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- **Sensitivity to sound:** Sensitivity to sound is endorsed.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- **Vision:** Dr. Haysbert notes white spots in her vision when staring off into the distance. She must close her eyes for several seconds for the spots to disappear.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- **Ring in the ear(s):** Side sleeping causes a sensation that something is draining or running from her ear.
- **Dizziness:** Sudden quick movements such as standing up quickly, laying down quickly, or turning her head quickly will cause dizziness. She has adapted to doing things slowly, to prevent the episodes of dizziness. The sensation of air in her ear causes dizziness and feelings of instability.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Life Care Plan for Haysbert, JoAnn | 10 of 100

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<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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- **Balance:** Sudden quick movements such as standing up quickly, laying down quickly, or turning her head quickly will cause imbalance. She has adapted to doing things slowly, to prevent the episodes of imbalance.
- **Speech:** Word-finding difficulties are endorsed. She has found herself needing to concentrate in order to enunciate the words.
- **Neurocognitive deficits:** Since the incident, Dr. Haysbert has complained of neurocognitive dysfunction.
 - a. **Memory:** Memory loss has been experienced. Dr. Haysbert noted that one day she was speaking with her relative on the telephone and told the relative she could not find this same telephone. The relative then explained to her that she was in fact using it for her call, and she realized it was in her hand. Her daughter reported noticing deficits in Dr. Haysbert's short-term memory. She further notes an inability to multitask or focus on more than one simple task at a time.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b. **Processing speed/confusion:**

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c. **Attention problems:**

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- **Sleep:** Sleep has been unaffected thus far, and normal sleep patterns are reported. She only gets up to go to the restroom. She awakens feeling tired, however, after what seemed to be a full night of sleep.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- **Fatigue/sluggishness:** Fatigue persists and is unabated by rest.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- **Nausea and/or weight change:** Nausea and/or emesis is presently denied. She has noticed weight loss.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- **Tremors:** Bilateral tremors were reported.
- **Bodily pain(s):** Body pain reported only in the left ear.
- **Numbness/tingling:** Numbness and/or tingling is reported in her feet.
- **Crying spells/emotional regulation:** To date, crying spells absent known cause have not occurred and are not problematic. Emotions are self-regulated and reasonably controlled.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- **Frustration and/or irritability:** An exacerbation of irritability and or an increase in frustration are reported only when she feels tired.

Not Experienced	No More of a Problem	A Mild Problem	A Moderate Problem	A Severe Problem
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- **Depression/Anxiety:** Dr. Haybert's son reported her to have a heightened anxiety level since the fall. To further evaluate the presence of depression, the PHQ-9 was administered to Dr. Haysbert; results are as below.

Depression Screening Questionnaire (PHQ-9)

QUESTION	SCORE
----------	-------

Life Care Plan for Haysbert, JoAnn | 12 of 100

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Little interest or pleasure in doing things?	Not at all - 0
Feeling down or hopeless?	Not at all - 0
Trouble falling or staying asleep, or sleeping too much?	Several days - 1
Feeling tired or having little energy?	More than half the days - 2
Poor appetite or overeating?	Not at all - 0
Feeling bad about yourself — or that you are a failure or have let yourself or your family down?	Not at all - 0
Trouble concentrating on things, such as reading the newspaper or watching television?	Not at all - 0
Moving or speaking so slowly that other people could have noticed. Or the opposite, being so fidgety or restless than usual?	Not at all - 0
Thoughts that you would be better off dead, or thoughts of hurting yourself in some way?	Not at all - 0
TOTAL SCORE = 0 - 4 = No depression, presently	

Based upon the above information, Dr. Haysbert's overall score exceeds the parameters for normal; thus, disability is present. With reasonable medical probability, I believe said disability is a result of the incident described in the History of Present Illness section above and will likely result in residual and/or ongoing issues.

On April 2, 2021, Dr. Haysbert was evaluated in the Sentara Port Warwick Emergency Department following a motor vehicle collision. Injury of the head, aneurysm of internal carotid artery, and essential hypertension were all noted at that time. A CT scan of the head performed at that visit revealed bilateral internal carotid artery aneurysms. Follow up with a neurosurgeon was scheduled; however, those visit records have not been made available for review. Likewise, it was reported that Dr. Haysbert is being evaluated by an orthopedic surgeon. Those records also have not yet been made available for review.

Life Care Plan for Haysbert, JoAnn | 13 of 100

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MEDICAL HISTORY PRIOR TO INJURY

- Hypothyroidism
- Hypertension
- Hyperlipidemia
- Endocrine conditions
- Vascular conditions
- Motor vehicle collision prior to birth of her children - no injuries
- Benign positional vertigo
- Vitamin D deficiency
- Urinary tract infection
- Moderate chronic small vessel ischemic disease

SURGICAL HISTORY PRIOR TO INJURY

- Cholecystectomy
- Cesarean delivery
- Tonsillectomy
- Adenoidectomy

MEDICAL HISTORY AFTER INJURY

- Post-traumatic headache
- Mild traumatic brain injury with neurocognitive deficits
- Speech abnormalities
- Anxiety disorder
- Post-traumatic vertigo and balance disorder
- Visual disturbances
- Hyperacusis
- Motor vehicle collision
- Injury of the head
- Aneurysm of internal carotid artery
- Coronavirus infection
- Long-haul syndrome
- Fatigue
- Arthralgias
- Contusion of left temporal area
- Wrist pain (left)
- Shoulder pain (left)
- Contusion of shoulder (left)
- Contusion of wrist (left)

Life Care Plan for Haysbert, JoAnn | 14 of 100

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- Abnormality to vitreous humor of both eyes
- Polyp of colon
- DJD of hand
- Acute sciatica

SURGICAL AND PROCEDURAL HISTORY AFTER TO INJURY

- None in medical records

CURRENT MEDICATIONS

- Tyrosine 500 mg oral capsule

ALLERGIES

- No known medication allergies.

EDUCATIONAL HISTORY

- Dr. Haysbert has had 20 years of formal education. After graduating from high school, she went on to earn her Bachelor of Arts degree in Psychology from Johnson C. Smith University in Charlotte, North Carolina in 1969. She then completed her Master's in Education degree in Educational Administration at Auburn University in 1974 and her Doctorate of Education, also at Auburn University, in 1978. Her doctoral degree was also in Educational Administration, with a teaching specialty in Psychology.

SOCIAL HISTORY

- Dr. Haysbert lived with her daughter until May 2021, at which time her daughter was married. She has no past history or current use of tobacco, alcohol, or illicit drugs.

FAMILY HISTORY

- Maternal: Hypertension, arthritis
- Maternal Grandmother: Arthritis, hypertension, arteriosclerosis
- Paternal: Diabetes
- Paternal Grandfather: Lung cancer, heavy smoker
- Sister: Hyperthyroid Disease
- Brother: Hypertension, CVA, prostate cancer

BACKGROUND INFORMATION

Dr. Haysbert was born and raised in Kingstree, South Carolina. While her father is now deceased, her mother is still living. She has both one brother and one sister. Dr. Haysbert,

herself, married once and remains married although separated from her husband now for 20 years. She has five children, who at the time of this writing are 50, 39, 38, 35, and 29 years old. Dr. Haysbert has no history of head injuries prior to the incident, as well as no history of diagnosed or undiagnosed mental health concerns.

Since obtaining her several degrees, Dr. Haysbert has had a long career in higher education, noting that she has always worked in teaching and administration. She has worked on and off at Hampton University in Hampton, Virginia since 1980. Additionally, she held the position of University President at Langston University, in Langston, Oklahoma, before returning to Hampton University in 2011. She currently serves as the Provost or Chief Academic Officer at Hampton University.

Dr. Haysbert has a strong work ethic and has prided herself in her problem solving abilities. She describes herself as always having been productive and hard-working. Furthermore, she has earned the recognition of her students and colleagues, demonstrated through awards she has received in the past for teaching excellence.

She has been active in numerous local, state and national organizations and served on professional boards including: National Campus Compact, Board of Trustees and Nominating Committee of The College Board; and the boards of directors for the State Chamber and Leadership Oklahoma. She was also a member of the American Council of Education's Commission on Women in Higher Education Board, Leadership Oklahoma -Class XX, and the advisory boards of the Greenwood Cultural Center in Tulsa, Black Liberated Arts Center, Inc. in Oklahoma City, the Tulsa Metro Urban League and Job Corps (Guthrie). More recently, she has been a member of the Hampton City Schools Advisory Board, National Institute of Aerospace Board of Directors, and the Southern Association of Colleges and Schools Commission on Colleges Board of Trustees.

***Source: Hampton University website*

Unfortunately, Dr. Haysbert has found herself unable to maintain her typical level of functioning since the time of her fall and blow to the head. She has found herself participating in fewer church activities and has limited going to her favorite restaurants due to her concerns that others will notice disruptions in her abilities. While she has always considered herself to be a people person, she now finds herself isolating from others. She has avoided engaging in the campus activities she once enjoyed and leaves church quickly after services rather than staying to socialize with others. Previously, she enjoyed going to thrift stores, but has found that her interest in this activity has waned. Dr. Haysbert has always needed to read related to her profession; however, her desire to do so has declined. She has begun listening to readings instead to compensate for this change.

Dr. Haysbert further notes that she has difficulty processing information at the same pace at which she is accustomed. She now lacks focus and struggles to concentrate on topics and tasks. In an effort to manage these difficulties, she must take numerous notes. The nature of her work results in complex issues which require her management abilities. In the past, she would take one meeting after another for the duration of her work day to address these. Since the time of the incident, she has had to adjust typical meeting times, decrease the length of her meetings, and increase the time between meetings in order to accommodate her changed cognitive functioning. She is doing everything within her power to decrease the stress of her work environment but remains frustrated and irritable as she struggles with her inability to perform as she has in the past. She notes that she has even been unable to complete a professional writing which she started prior to her injury. These are significant disruptions to the life of a once dynamic and conscientious academic professional.

REVIEW OF SYSTEMS

***Review of systems is reflective of Dr. Haysbert's most recent in-person medical visit with Lind Chinnery, MD on September 25, 2020.*

GENERAL/CONSTITUTIONAL: No fever, chills, or weight change.

HEAD: No headaches or migraines.

EYES: No blurred or double vision.

CARDIOVASCULAR: No high blood pressure, heart attack, or irregular heart beat.

RESPIRATORY: No cough or shortness of breath.

GASTROINTESTINAL: No abdominal pain, nausea, diarrhea, or constipation.

GENITOURINARY: No kidney stones, urinary tract infections, or other urinary tract problem.

MUSCULOSKELETAL: No joint or back pain or muscle problems.

SKIN: No rashes or other skin complaints.

NEUROLOGIC: No weakness, no stroke, no seizures, no numbness or tingling.

PSYCHIATRIC: No anxiety or depression.

ENDOCRINE: No excessive thirst or excessive heat or cold.

HEMATOLOGIC/LYMPHATIC: No anemia or easy bleeding.

ALLERGIC/IMMUNOLOGIC: No tuberculosis, hepatitis, or recurrent infections.

PHYSICAL EXAMINATION

***Physical examination is reflective of Dr. Haysbert's most recent in-person medical visit with Lind Chinnery, MD on September 25, 2020.*

GENERAL: Normotensive; in no acute distress.

HEAD: Normocephalic, no lesions.

EYES: 20/25 OU. PERRLA, EOMs full, conjunctiva clear, fundi grossly normal.

EARS: Decreased performance on hearing test with high tones. EACs clear, TMs normal.

NOSE: Mucosa normal, no obstruction.

THROAT: Clear, no exudates, mild erythema, no lesions.

NECK: Supple, no masses, no thyromegaly, no bruits.

CARDIOVASCULAR: RR, no murmurs, no rubs, no gallops.

LUNGS: Clear, no rales, no rhonchi, no wheezes.

ABDOMEN: Soft, no tenderness, no masses, BS normal.

EXTREMITIES: Tenderness in the trochanteric area bilaterally with some crepitus consistent with arthritis. FROM, no deformities, no edema, no erythema.

BACK: Normal curvature, no tenderness.

NEURO: Physiological, no localized findings.

SKIN: Normal, no rashes, no lesions noted.

MENTAL STATUS: MMSE 30/30.

MOOD: Depression screening score 0.

SUMMARIZED MEDICAL RECORDS

SOURCES

1. Divine Health Care, LLC - Lind Chinnery, MD, FACP
2. LabCorp

3. MedCare - Jaime Stuewer, NP
4. Medical Imaging of Southern California
5. National Brain Injury Institute - Huma Haider, MD
6. Sentara Port Warwick Emergency Department - Richard Tan, MD
7. Tidewater Physicians Multispecialty Group

CHRONOLOGY OF CARE

1. April 11, 2018 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Follow up concerning vertigo. Continued early morning vertigo and difficulty with respect to vertigo being positional and changing with movement.
- **PE:** Lipid panel significant for LDL of 131, TC 204 mg/dl. Vitamin D 26. TSH 5.58.
- **Assessment:** Evidence of urinary tract infection that is resolved. Appears chemically hypothyroid. Vitamin D deficient. Diagnoses include benign positional vertigo, UTI.
- **Plan:** MRI of head, PVL studies of carotid, and VB system will be completed. ENT consultation to be requested. Will receive vitamin D supplement. Continue medications.

2. July 9, 2018 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Follow up visit post-fall and striking head on slick floor. Difficulty with slight bruising. Resolved vertigo and labyrinthitis. Some lightheadedness and dull headache. Review of intracranial MRI results.
- **PE:** Lipid panel significant for LDL of 131, TC 204 mg/dl. Vitamin D 26. TSH 5.58. MRI of head with no evidence of acute findings. Mild small vessel ischemic disease.
- **Assessment:** Significant improvement in resolution of vertigo. Negative MRI. Negative evaluation for vertigo. Appears to be secondary to probably labyrinthitis causing benign positional vertigo. Contusion of the temporal area on the left.
- **Plan:** Continue medications as prescribed. Low sodium diet. Low cholesterol diet. Exercise. Follow up in 2 months.

3. September 10, 2018 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Follow up for dizziness. Complaints of left ear feeling "strange". Reports suspicion of UTI.
- **PE:** Alert and oriented.
- **Assessment:** Vertigo has subsided. Impacted cerumen to left EAC. Blood pressure stable on Maxzide. Urine is normal.

- **Plan:** Return for ear irrigation. Continue medications as prescribed. Follow up in 2 weeks.
- 4. September 24, 2018 - Divine Health Care, LLC - Lind Chinnery, MD, FACP**
- **CC:** Follow up on dizziness and left ear cerumen impaction. Admits total resolution of dizziness. Admits to morning nausea since last visit.
 - **PE:** Alert and oriented.
 - **Assessment:** Total resolution of dizziness. Well controlled hypertension. Not taking thyroid medications as she should.
 - **Plan:** Low cholesterol diet. Advised ACV and beet juice for daily nutrition. Return in 6 weeks to repeat TSH. Given educational handout on cholesterol.
- 5. September 25, 2018 - MedCare - Jaime Stuewer, NP**
- **CC:** Pain level of 7 out of 10.
 - **Assessment:** Diagnoses for visit include accidental fall, wrist pain (left), shoulder pain (left), contusion of shoulder (left), contusion of wrist (left). Currently taking diuretic. Tests performed today include x-ray of shoulder and x-ray of wrist. Procedures include forearm splint.
 - **Plan:** Return to clinic if signs and symptoms worsen or persist. Follow up in 2-5 days with PCP. Drink plenty of water, get plenty of rest. Take all medications as prescribed. Start Naprosyn 250 MG 1 tablet orally 2x/day for 10 days.
- 6. September 23, 2019 - Divine Health Care, LLC - Lind Chinnery, MD, FACP**
- **CC:** Annual wellness exam, including personalized prevention plan services. Reports left earache with lying on left side. History of vertigo, but denies any recent episodes.
 - **PE:** Hemoglobin 12.5. Decreased hearing with high tones. Eye exam 20/25 OU. MMSE 30/30. Depression screening: 1.
 - **Assessment:** Abnormality to vitreous humor bilateral eyes.
 - **Plan:** Return in 3 months. Return in one year for subsequent annual visit. Encouraged to follow up with eye doctor. Continue medications.
- 7. January 8, 2020 - Divine Health Care, LLC - Lind Chinnery, MD, FACP**
- **CC:** Follow up visit. HTN, hypothyroidism, pain in right hip, knee, and thumb. Slight dizziness in the past from resolved head trauma from fall. Review of labs.
 - **PE:** Tenderness of right sciatic notch. Crepitus of right knee. Right thumb tenderness at base of thumb at MCP joint. Vitamin D 14.2. Lipid panel significant for LDL of 133 mg/dL, otherwise normal. TSH 6.52. T3 uptake 23, low.

- **Assessment:** Hypothyroidism. Vitamin D deficiency. Hypercholesterolemia. DJD of right median thumb. Right sciatica from long car trips and sitting on hard surfaces. Polyp of colon.
- **Plan:** Continue with medications as prescribed. Follow up in 2 months. Low sodium diet. Low cholesterol diet. Exercise.

8. September 18, 2020 - National Brain Injury Institute - Huma Haider, MD

- **CC:** Initial comprehensive evaluation; via telephone.
- **Subjective:** Headaches of 7-8/10 intensity noted 1-2 days per week, lasting for two hours to all day. Felt as: throbbing, pulsating, stabbing, piercing sensation over the entire crown. Has associated light sensitivity, sound sensitivity, and dizziness. Occasional white spots noted in vision. Sensation that ear is draining if lying on her side. Dizziness and difficulty with balance noted with sudden, quick movements. Word-finding difficulties, short-term memory impairment, slowed processing speed, and difficulty paying attention all noted. Feels fatigued despite regular sleep patterns at night. Weight loss reported. Bilateral tremors, pain in her left ear, numbness/tingling in the feet, irritability when tired, and increased anxiety all noted.
- **Physical exam:** Ambulates independently (reported). Oriented to person, place, problem, and time. Seemingly frustrated. Word-finding difficulties noted at times.
- **Assessment:** Post-traumatic headache. Mild traumatic brain injury with neurocognitive deficits. Speech abnormalities. Anxiety disorder. Post-traumatic vertigo and balance disorder. Visual disturbances. Hyperacusis.
- **Plan:** Riboflavin 25-400 mg daily, coenzyme Q10 150-200 mg twice daily, magnesium oil topical spray 400-600 mg daily/4-5 sprays, butterbur root extract/blatterdock 50 mg 2-3 times daily, and Tylenol 500 mg twice weekly for headaches. Neurorehabilitative exercises, environmental enrichment, stress management techniques, neurocognitive recovery supplements recommended. Diffusion tensor imaging ordered; neuropsychological assessment battery recommended. Deep breathing and speech exercises to address speech concerns; consider evaluation by a speech-language pathologist. Apps recommended to address anxiety. At-home vestibular exercises to address dysfunction; videonystagmography ordered. Follow up with optometrist yearly; rose-tinted glasses recommended. Avoid loud sounds when possible, or use ear plugs if unable to avoid. Follow up in six months.

9. September 25, 2020 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Annual wellness visit, including personalized prevention plan services. Concerns include hypothyroidism, HL, hypertension, DJD, and remote history of vertigo. Complains of bilateral hip pain that improves with activity.
- **PE:** Tenderness in the trochanteric area bilaterally with some crepitus consistent with arthritis. Hearing decreased with high tones. Eye exam 20/25 OU. MMSE 30/30. Depression screening 0.
- **Assessment:** Controlled hypertension with clinically euthyroid.
- **Plan:** Return in one year for subsequent annual visit. Continue medications as prescribed. Start on Voltaren gel to the hips, in addition to Tylenol for control of DJD. Follow up in 4 months. Low sodium diet. Low cholesterol diet. Exercise.

10. February 9, 2021 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Visit conducted via telemedicine due to testing positive for COVID-19. Follow up visit for hypertension, hypothyroidism, vitamin D deficiency, intermittent right flank pain, colonic polyps, and sciatica.
- **PE:** Performed via telehealth. Fatigue from COVID-19 infection. Intermittent myalgias.
- **Assessment:** COVID-19 infection appears to be resolved. Post viral syndrome. Stable DJD. Hypercholesterolemia is controlled with statin. Hypertension is well controlled.
- **Plan:** Continue medications as prescribed. Follow up in 1 week. Labs ordered to include CBC, CMP, lipids, TSH, vitamin D, and HB A1C. Also to include sedimentation rate.

11. February 22, 2021 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Visit conducted via telemedicine. Follow up to review labs. Requested letter against COVID-19 vaccine for her job.
- **PE:** Completed via telehealth. Alert and oriented. Pleasant, cooperative, and in good mood. High creatinine levels, 1.03. High cholesterol levels, 206. High LDL Chol Calc, 143.
- **Assessment:** Resolved COVID-19. Postviral fatigue syndrome improved. Hypothyroidism euthyroid with normal TSH.
- **Plan:** Follow up in 2 months. Continue present regimen as previously prescribed.

12. April 2, 2021 - Sentara Port Warwick Emergency Department - Richard Tan, MD

- **Visit summary:** Dr. Haysbert was seen for motor vehicle collision, injury of the head, aneurysm of internal carotid artery, and essential hypertension. CT of the head was performed; no acute intracranial process detected. Bilateral internal carotid artery aneurysms were noted. It was recommended that she contact a

neurosurgeon if considering intervention for the aneurysms. Over the counter medication recommended for pain management as needed. She was instructed to follow up with her primary care provider the next day for management of her hypertension.

13. April 16, 2021 - Divine Health Care, LLC - Lind Chinnery, MD, FACP

- **CC:** Visit completed via telemedicine. Follow up visit post MVA on 4/2/2021. Abnormal findings on CT of head.
- **PE:** Completed via telehealth. Alert and oriented.
- **Assessment:** Evidence of 12 mm and 9 mm aneurysm bilaterally intracranially per CT of head.
- **Plan:** Continue medications as prescribed. Follow up as scheduled. Low sodium diet. Low cholesterol diet. Exercise.

14. (date not documented) - Divine Health Care - Lind W. Chinnery, MD, FACP

- **Physician letter:** It was recommended that Dr. Haysbert not receive the COVID-19 vaccine as requested by her employer. She tested positive for COVID-19 on 01/04/2021 and quarantined from 01/04/2021 through 01/22/2021. COVID testing also performed on 01/19/2021, 01/22/2021, 12/01/2021, and 02/21/2021. She was documented to have had coronavirus infection and manifested active immunity with IgG antibodies present. Vaccine not recommended due to her history of allergies and vascular disease. She was noted to be suffering long-haul syndrome with post viral/post COVID symptoms including fatigue, arthralgias, and foggy mentation. It was further noted that she was undergoing evaluation by a neurosurgeon and the neuroradiology department.

CHRONOLOGICAL IMAGING/TEST RESULTS

1. June 4, 2018 - Tidewater Physicians Multispecialty Group

- **MRI of the brain:** Limited MRI examination secondary to susceptibility artifact related to metallic right-sided dental hardware. No acute intracranial process. Moderate chronic small vessel ischemic disease. Abnormal flow voids at the level of the distal portions of the right greater than left internal carotid arteries. These are most consistent with ICA aneurysms. The distal right ICA flow void measures up to 1.2 cm in dimension and the distal left internal carotid artery flow void measures up to 7 mm in dimension. Follow up is recommended with CTA of the head and neck.

2. September 25, 2018 - MedCare

- **X-Ray of left shoulder and wrist:** Results of wrist include no soft tissue swelling, no fractures, normal carpal alignment, normal wrist. Shoulder results not reported.

3. September 18, 2020 - Medical Imaging of Southern California

- **Diffusion tensor imaging:** Overall impression is generally normal routine brain imaging with some expansion of the left occipital horn of the lateral ventricle which may reflect some prior volume loss. Extensive FLAIR abnormalities of unclear clinical significance, not specifically related in location to the areas of fractional anisotropy losses. The fractional anisotropy analysis and the tractographic analysis both demonstrate problems in the frontal lobe associated with the white matter stem of the superior, middle and inferior frontal gyri with expected effects of impairment of multistep planning, map-based planning and emotional control release functions. Both demonstrate problems in the angular gyrus in the left parietal lobe which for this right-handed individual would be expected to have the effect of impairment of word finding and calculation ability. Losses appreciated both in both evaluations with regard to the arcuate fasciculus which can affect prosody or flow of speech as well as the other aspects of speech processing. There are losses in the fornix which would be expected to have the effect of impairment of new memory formation. The tractographic analysis additionally demonstrates problems bilaterally in the supra-callosal cingulum which would have the expected effects of increased anxiety and depression. The fractional anisotropy analysis additionally demonstrates some low numbers for the occipital lobe on the left which may reflect impairment of processing of visual information arising on the right side of the body. Some low numbers for the left uncinate fasciculus and inferior frontal occipital fasciculus, not quite statistically significant, but may reflect problems such as flattening of affect and loss of emotional drive and some types of visual recognition phenomena. There are low numbers in the left hippocampal cingulum and to a lesser extent in the right hippocampal cingulum which may reflect problems with attention, and some low numbers on the medial lemniscus, particularly on the left side, which may reflect impairments associated with the midbrain such as difficulties with pupillary accommodation, eye movement, convergence, and possible associated with symptoms such as photophobia. Overall, these findings demonstrate multiple abnormalities which would be expected to have effects on cognition, emotional behavior and neurologic functions as detailed above. The severity of the abnormalities appreciated in the imaging would be expected to

have clinically significant symptoms. The locations and types of injury are consistent with the mechanics of the trauma as described.

4. February 10, 2021 - LabCorp

- **CBC with differential/platelet:** All values within reference ranges.
- **CMP:** Notable for elevated creatinine at 1.03, decreased eGFR at 54.
- **Lipid panel:** Notable for elevated cholesterol at 206, elevated LCL at 143.
- **TSH:** Within reference range.
- **Hemoglobin A1c:** Within reference range.
- **Sedimentation rate:** Within reference range.

5. April 2, 2021 - Sentara Port Warwick Emergency Department

- **CT head:** Bilateral supraclinoid ICA aneurysms. On the right it measures 12 mm and is rim calcified. On the left it measures 9mm. No acute intracranial process detected.

IMPACT OF INJURY

IMPACT ON FUTURE EARNINGS

	Work Requirements
Prior To incident	<p>Occupation: Provost/Chief Academic Officer Hampton University</p> <ul style="list-style-type: none"> • Recommends all members of the faculty for appointment, promotion, tenure, retention, non-retention, or dismissal for cause • Plans, develops, and evaluates academic programs • Fosters the development of new teaching methods • Recommends additions and alterations to the physical plan that are needed for academic purposes • Coordinates internal administrative review and external regulatory or accreditation consideration of academic policies, plans, and programs • Maintains academic standards of Hampton University and of appropriate accrediting bodies

- Represents the University at public events
- Oversees faculty and academic staff recruitment and development activities
- Establishes priorities and plans for program development, faculty recruitment, and development
- Coordinates periodic academic program review, accreditation, and works with Deans and Chairs in the review, study, and development of curriculum and in the improvement of instruction
- Develops and ensures adherence to the academic affairs budget and participates in the development of the budget for the University as a whole
- Must possess expertise in developing/implementing processes and plans for institutional effectiveness
- Must understand the governance and administrative processes used in higher education institutions
- Collaborates with the university faculty, students, and staff to foster and advance academic excellence and student success on campus
- Manages the financial resources of the University through an effective annual operating budget and long-term financial plan
- Designs and oversees the implementation of initiatives that support university objectives and will advance scholarly and creative pursuits among faculty, graduate students, undergraduate students, and post-docs
- Leads efforts to recruit and retain distinguished, diverse professors and researchers as part of initiatives to expand the prominence and global reach of the faculty at the university
- Develops and implements strategies to enrich student success, including students' classroom, research, and extracurricular experiences at both undergraduate and graduate levels
- Promotes interdisciplinary and cross-college initiatives that will build on areas of existing strength
- Works with the president and other vice presidents to further university initiatives
- Works with the deans to develop unit-specific priorities and plans
- Works with administrators and faculty to launch innovative academic programs, both traditional and online, with the potential to increase student enrollment
- Must possess the ability to communicate effectively and to establish and maintain effective professional relationships with others
- While performing the duties of this job, the employee is regularly required to talk or hear

Life Care Plan for Haysbert, JoAnn | 26 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

Dallas: 7800 N. Stemmons Fwy, Ste. 340, Dallas, TX 75247

Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

San Antonio: 8235 S New Braunfels Ave, Ste 101, San Antonio, TX 78223

Exhibit B

	<ul style="list-style-type: none"> Must be able to frequently stand, walk, and use hands to feel and reach with hands and arms
After the incident	Dr. Haysbert continues to serve as Provost/Chief Academic Officer at Hampton University.
Future	To date, Dr. Haysbert's providers have not commented on or made recommendations regarding future employment.

Summary: Prior to the fall and blow to the head that Dr. Haysbert suffered, she served as the Provost/Chief Academic Officer at Hampton University. Following the incident, Dr. Haysbert has remained in this position but has struggled to work at the same capacity at which she is accustomed. She has been forced to make alterations to her schedule in order to accommodate her changed cognitive abilities. As such, she is now working longer hours to accomplish the same work she did prior to her fall. Dr. Haysbert's earning potential and ability to maintain leadership positions in higher education is now threatened due to the injuries sustained.

IMPACT OF INJURIES ON ACTIVITIES OF DAILY LIVING [ADLs] AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING [IADLs].

***This table reflects a combination of information derived from Dr. Haysbert's medical records, as well as direct reporting from Dr. Haysbert.*

Activity	Before Incident	After Incident
Feeding	<ul style="list-style-type: none"> Feeds self completely independently, including food movement to mouth, swallowing, and related tasks. Needs assistance with cutting, chopping and/or related tasks. Needs assistance spooning or moving food/drinks to mouth. Difficulty swallowing and/or moving food from mouth to stomach. Tube feeding or other completely 	<ul style="list-style-type: none"> Feeds self completely independently, including food movement to mouth, swallowing, and related tasks. Needs assistance with cutting, chopping and/or related tasks. Needs assistance spooning or moving food/drinks to mouth. Difficulty swallowing and/or moving food from mouth to stomach. Tube feeding or other completely

	dependent food intake.	dependent food intake.
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Activity	Before Incident	After Incident
Bathing	<ul style="list-style-type: none"> ○ Takes a shower or bath completely independently with an adequate level of cleanliness achieved. Includes drying off and safely entering/departing shower or tub. ○ Needs assistance with entering/departing shower or tub, but can wash self without aid. ○ Needs assistance to wash hard to reach spots, such as back or feet. ○ Difficulty washing resulting in inadequate levels of cleanliness and safety issues without moderate aid. Unable to perform most tasks of bathing, such as: hair washing, use of soap, drying with a towel, etc. ○ Requires total assistance to bathe, such as in-shower/tub help, sponge baths, etc. 	<ul style="list-style-type: none"> ○ Takes a shower or bath completely independently with an adequate level of cleanliness achieved. Includes drying off and safely entering/departing shower or tub. ○ Needs assistance with entering/departing shower or tub, but can wash self without aid. ○ Needs assistance to wash hard to reach spots, such as back or feet. ○ Difficulty washing resulting in inadequate levels of cleanliness and safety issues without moderate aid. Unable to perform most tasks of bathing, such as: hair washing, use of soap, drying with a towel, etc. ○ Requires total assistance to bathe, such as in-shower/tub help, sponge baths, etc.

Activity	Before Incident	After Incident
Grooming	<ul style="list-style-type: none"> ○ Is completely independent in self-presentation and hygiene tasks including: brushing teeth, combing hair, shaving, make-up application, etc. ○ Needs assistance with gathering items or reminders to complete certain tasks, but otherwise independent. 	<ul style="list-style-type: none"> ○ Is completely independent in self-presentation and hygiene tasks including: brushing teeth, combing hair, shaving, make-up application, etc. ○ Needs assistance with gathering items or reminders to complete certain tasks, but otherwise independent.

	<ul style="list-style-type: none"> Needs assistance with physical tasks, such as reaching to brush long hair, or holding a razor steady. (mechanical/physical) Needs assistance with cognitive-based tasks such as reminders of what toothpaste is for, or frequency required for toothbrushing. (planning/steps/memory) Unable to groom to a level of satisfactory standards absent complete or nearly complete assistance. 	<ul style="list-style-type: none"> Needs assistance with physical tasks, such as reaching to brush long hair, or holding a razor steady. (mechanical/physical) Needs assistance with cognitive-based tasks such as reminders of what toothpaste is for, or frequency required for toothbrushing. (planning/steps/memory) Unable to groom to a level of satisfactory standards absent complete or nearly complete assistance.
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Activity	Before Incident	After Incident
Dressing	<ul style="list-style-type: none"> Is completely independent in clothes and shoes dressing, including zippers, buttons, and shoe tying. Needs assistance with fine motor movements and/or coordinated movements such as buttons, zippers, and/or shoe tying. Needs assistance with smaller items, such as socks, ties, suspenders, and/or belts. Needs assistance with taking off/putting on shirt, pants, and/or sweaters. Needs assistance with appropriate attire reminders, such as a coat in the snow, or a swimsuit for the pool. Unable to groom to dress self absent major help to include complete or nearly complete dressing. 	<ul style="list-style-type: none"> Is completely independent in clothes and shoes dressing, including zippers, buttons, and shoe tying. Needs assistance with fine motor movements and/or coordinated movements such as buttons, zippers, and/or shoe tying. Needs assistance with smaller items, such as socks, ties, suspenders, and/or belts. Needs assistance with taking off/putting on shirt, pants, and/or sweaters. Needs assistance with appropriate attire reminders, such as a coat in the snow, or a swimsuit for the pool. Unable to groom to dress self absent major help to include complete or nearly complete dressing.

Activity	Before Incident	After Incident
Bathroom/Toileting	<ul style="list-style-type: none"> ○ Is completely independent in toileting and experiences no incontinence. Can remove and rearrange clothing before and after toileting independently. ○ Needs assistance with clothing removal and/or rearrangement for toileting, but experiences no incontinence. ○ Needs physical help on/off the toilet, but otherwise independent. ○ Experiences increased urinary frequency, but has not experienced incontinence. ○ Experiences increased bowel frequency, but has not experienced incontinence. ○ Experiences increased constipation. ○ Experiences occasional incontinence of bowels. (1-4 x per month) ○ Experiences occasional incontinence of bladder. (1-4 x per month) ○ Experiences frequent incontinence of bowels. (5+ x per month) ○ Experiences frequent incontinence of bladder. (5+ x per month) ○ Unable to control bowels and/or bladder, or has assistive device (catheter or other) to aid in function. 	<ul style="list-style-type: none"> ○ Is completely independent in toileting and experiences no incontinence. Can remove and rearrange clothing before and after toileting independently. ○ Needs assistance with clothing removal and/or rearrangement for toileting, but experiences no incontinence. ○ Needs physical help on/off the toilet, but otherwise independent. ○ Experiences increased urinary frequency, but has not experienced incontinence. ○ Experiences increased bowel frequency, but has not experienced incontinence. ○ Experiences increased constipation. ○ Experiences occasional incontinence of bowels. (1-4 x per month) ○ Experiences occasional incontinence of bladder. (1-4 x per month) ○ Experiences frequent incontinence of bowels. (5+ x per month) ○ Experiences frequent incontinence of bladder. (5+ x per month) ○ Unable to control bowels and/or bladder, or has assistive device (catheter or other) to aid in function.

Activity	Before Incident	After Incident
Transfers	<ul style="list-style-type: none"> ○ Is completely independent in transferring from one area to another safely. ○ Needs verbal reminders/assistance to transfer safely, but can physically do so independently. ○ Needs minimal physical assistance to do so safely or without pain. (Hold an arm to stand up, steadying hand, etc.) ○ Needs moderate physical assistance to do so safely or without pain. (Supporting more than half of person's weight, or responsible for more than half of the task involved). ○ Requires transfer benches, hand-hold pegs or slots, or other self-dependent devices for aid. ○ Requires assistive devices, such as belts, halters, or slings to move from one surface to another. ○ Is unable to sit or stand independently due to lack of balance; safety issues. Requires complete assistance for transfers. 	<ul style="list-style-type: none"> ○ Is completely independent in transferring from one area to another safely. ○ Needs verbal reminders/assistance to transfer safely, but can physically do so independently. ○ Needs minimal physical assistance to do so safely or without pain. (Hold an arm to stand up, steadying hand, etc.) ○ Needs moderate physical assistance to do so safely or without pain. (Supporting more than half of person's weight, or responsible for more than half of the task involved). ○ Requires transfer benches, hand-hold pegs or slots, or other self-dependent devices for aid. ○ Requires assistive devices, such as belts, halters, or slings to move from one surface to another. ○ Is unable to sit or stand independently due to lack of balance; safety issues. Requires complete assistance for transfers.

Activity	Before Incident	After Incident
Mobility	<ul style="list-style-type: none"> ○ Is completely independent in moving through the community on reasonably level surfaces. ○ Independently moves in the community on reasonably level surfaces with the 	<ul style="list-style-type: none"> ○ Is completely independent in moving through the community on reasonably level surfaces. ○ Independently moves in the community on reasonably level surfaces with the

	<p>use of cane, walking stick, or related device.</p> <ul style="list-style-type: none"> Independently moves through the community with the aid of assistive device such as rollator walker, wheelchair, or related device. Mobile only with the aid of another person's direct physical assistance, such as holding waist or shoulder for support. Unable to walk more than 50 yds. unaided. Unable to walk more than 50 yds. absent pain. Uses an assistive device, but is not independent. Requires verbal or physical reminders for safe use. Completely immobile in the community. Requires total movement assistance. 	<p>use of cane, walking stick, or related device.</p> <ul style="list-style-type: none"> Independently moves through the community with the aid of assistive device such as rollator walker, wheelchair, or related device. Mobile only with the aid of another person's direct physical assistance, such as holding waist or shoulder for support. Unable to walk more than 50 yds. unaided. Unable to walk more than 50 yds. absent pain. Uses an assistive device, but is not independent. Requires verbal or physical reminders for safe use. Completely immobile in the community. Requires total movement assistance.
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Activity	Before Incident	After Incident
Stairs	<ul style="list-style-type: none"> Is completely independent in stair traversing, both ascending and descending. Needs verbal reminders/assistance to navigate stairs safely, but can do independently otherwise. Heavily depends upon railings for safe traversing. Requires slow and intentional pace, but can navigate safely. Experiences pain with stairs and tries to 	<ul style="list-style-type: none"> Is completely independent in stair traversing, both ascending and descending. Needs verbal reminders/assistance to navigate stairs safely, but can do independently otherwise. Heavily depends upon railings for safe traversing. Requires slow and intentional pace, but can navigate safely. Experiences pain with stairs and tries to

	<p>avoid, but can do independently when necessary.</p> <ul style="list-style-type: none"> Physical pain limitations require assistance for stair navigation. Unable to navigate stairs or other surface-level changes due to mobility issues or assistive device use. 	<p>avoid, but can do independently when necessary.</p> <ul style="list-style-type: none"> Physical pain limitations require assistance for stair navigation. Unable to navigate stairs or other surface-level changes due to mobility issues or assistive device use.
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Activity	Before Incident	After Incident
Hearing	<ul style="list-style-type: none"> Hearing is not a source of worry, and seems to be within normal limits. Hearing of some frequencies or levels is reduced, but overall not a source of concern. Hearing is moderately difficult, with repetition of words at times and an increased need for higher volumes for understanding. Hearing is difficult on most days with frequent inability to discern sounds or words in normal activities. Hearing is difficult due to tinnitus, but remains overall within normal limits. Hearing loss has been diagnosed laterally. Hearing loss has been clinically diagnosed bilaterally. Hearing is aided by assistive device laterally. Hearing is aided by assistive devices bilaterally. 	<ul style="list-style-type: none"> Hearing is not a source of worry, and seems to be within normal limits. Hearing of some frequencies or levels is reduced, but overall not a source of concern. Hearing is moderately difficult, with repetition of words at times and an increased need for higher volumes for understanding. Hearing is difficult on most days with frequent inability to discern sounds or words in normal activities. Hearing is difficult due to tinnitus, but remains overall within normal limits. Hearing loss has been diagnosed laterally. Hearing loss has been clinically diagnosed bilaterally. Hearing is aided by assistive device laterally. Hearing is aided by assistive devices bilaterally.

	<ul style="list-style-type: none"> Complete loss of functional hearing and/or deafness is experienced and/or has been diagnosed. 	<ul style="list-style-type: none"> Complete loss of functional hearing and/or deafness is experienced and/or has been diagnosed.
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Activity	Before Incident	After Incident
Seeing	<ul style="list-style-type: none"> Sight and visual function are seemingly within normal limits and are not an area of concern. Sight is aided by glasses/contacts to a reasonably functional level and is not a source of concern. Vision is reduced and difficulty seeing due to blurriness exists. Floaters, flashes of lights, or similar issues impede vision. Prescription lenses no longer provide a level of visual function adequate for daily life. Monocular vision loss is experienced and/or has been clinically diagnosed. Total vision loss is experienced and/or has been clinically diagnosed. 	<ul style="list-style-type: none"> Sight and visual function are seemingly within normal limits and are not an area of concern. Sight is aided by glasses/contacts to a reasonably functional level and is not a source of concern. Vision is reduced and difficulty seeing due to blurriness exists. Floaters, flashes of lights, or similar issues impede vision. Prescription lenses no longer provide a level of visual function adequate for daily life. Monocular vision loss is experienced and/or has been clinically diagnosed. Total vision loss is experienced and/or has been clinically diagnosed.

Activity	Before Incident	After Incident
Speech/Communication	<ul style="list-style-type: none"> Speaks, reads and understands spoken words adequately and within seemingly normal limits. No concern experienced in regard to communication. 	<ul style="list-style-type: none"> Speaks, reads and understands spoken words adequately and within seemingly normal limits. No concern experienced in regard to communication. Difficulty with oral production and/or

	<ul style="list-style-type: none"> ○ Difficulty with oral production and/or changes in speech patterns experienced. (stuttering, slowness, misused words) ○ Difficulty with understanding spoken or heard words. ○ Difficulty with written words or communications. ○ Struggles with communication due to anxiety and social changes. ○ Completely or nearly unable to communicate orally. 	<p>changes in speech patterns experienced. (stuttering, slowness, misused words)</p> <ul style="list-style-type: none"> ○ Difficulty with understanding spoken or heard words. ○ Difficulty with written words or communications. ○ Struggles with communication due to anxiety and social changes. ○ Completely or nearly unable to communicate orally.
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Activity	Before Incident	After Incident
Tactile Feeling/Grasping	<ul style="list-style-type: none"> ○ Sensation and grip are adequate for daily life and are not a source of worry. ○ Some changes in the ability to recognize temperature, vibration, light touch, and/or pain are experienced. ○ Some loss of grip or the ability to securely grasp desired large items is experienced. (cup, book, ball). ○ Some loss of grip or the ability to securely grasp desired small items is experienced. (pen, pill, key). ○ Areas of total or nearly total tactile sensation loss are experienced. ○ Total or nearly total loss of the ability to grasp large items meaningfully (hold a ball, open a door with the handle, etc.) is experienced. 	<ul style="list-style-type: none"> ○ Sensation and grip are adequate for daily life and are not a source of worry. ○ Some changes in the ability to recognize temperature, vibration, light touch, and/or pain are experienced. ○ Some loss of grip or the ability to securely grasp desired large items is experienced. (cup, book, ball). ○ Some loss of grip or the ability to securely grasp desired small items is experienced. (pen, pill, key). ○ Areas of total or nearly total tactile sensation loss are experienced. ○ Total or nearly total loss of the ability to grasp large items meaningfully (hold a ball, open a door with the handle, etc.) is experienced.

	<ul style="list-style-type: none"> ○ Total or nearly total loss of the ability to grasp small items meaningfully (use forks, write with pencils, etc.) is experienced. 	<ul style="list-style-type: none"> ○ Total or nearly total loss of the ability to grasp small items meaningfully (use forks, write with pencils, etc.) is experienced.
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Activity	Before Incident	After Incident
Sleep	<ul style="list-style-type: none"> ○ Sleeping is restful and adequate for daily life most times. Refreshment is experienced upon waking and fatigue is not present on most days. ○ Sleep is restless and refreshment is not experienced with waking. Fatigue is present as a result. ○ Sleep is plentiful and in sufficient amounts, but refreshment is not experienced and/or fatigue is common. ○ Sleep is pervaded by pain. ○ Sleep is pervaded by a racing mind or inability to relax. ○ Use of medication or aids allows for restful sleep and refreshed feeling. ○ Medication is ineffective and sleep remains deficient. ○ Sleep is experienced in excess. 	<ul style="list-style-type: none"> ○ Sleeping is restful and adequate for daily life most times. Refreshment is experienced upon waking and fatigue is not present on most days. ○ Sleep is restless and refreshment is not experienced with waking. Fatigue is present as a result. ○ Sleep is plentiful and in sufficient amounts, but refreshment is not experienced and/or fatigue is common. ○ Sleep is pervaded by pain. ○ Sleep is pervaded by a racing mind or inability to relax. ○ Use of medication or aids allows for restful sleep and refreshed feeling. ○ Medication is ineffective and sleep remains deficient. ○ Sleep is experienced in excess.

Activity	Before Incident	After Incident
Ability to	<ul style="list-style-type: none"> ○ Is completely independent in money 	<ul style="list-style-type: none"> ○ Is completely independent in money

Handle Finances	matters. Can adequately budget, pay bills, perform banking activities, understand financial documents, etc.	matters. Can adequately budget, pay bills, perform banking activities, understand financial documents, etc.
	<ul style="list-style-type: none"> Needs minor assistance, such as bill pay reminders or digital/app aids for banking. Independent in everyday money matters, but requires assistance for major purchases or to understand financial documents, such as with a mortgage, loan, or bank statement. Needs moderate assistance, without which rent would not be paid, finances would be at risk, and income management would not be done. Depends upon a third party to handle financial matters. Completely unable to handle financial matters and has experienced repercussions as a result. 	<ul style="list-style-type: none"> Needs minor assistance, such as bill pay reminders or digital/app aids for banking. Independent in everyday money matters, but requires assistance for major purchases or to understand financial documents, such as with a mortgage, loan, or bank statement. Needs moderate assistance, without which rent would not be paid, finances would be at risk, and income management would not be done. Depends upon a third party to handle financial matters. Completely unable to handle financial matters and has experienced repercussions as a result.

Activity	Before Incident	After Incident
Food Preparation	<ul style="list-style-type: none"> Is completely independent in planning, preparing and serving adequate meals. Independently prepares and serves meals with planning assistance and provided ingredients. Experiences difficulty with physically-intense food preparation tasks, such as chopping, slicing, or pouring. Experiences difficulty with recipe 	<ul style="list-style-type: none"> Is completely independent in planning, preparing and serving adequate meals. Independently prepares and serves meals with planning assistance and provided ingredients. Experiences difficulty with physically-intense food preparation tasks, such as chopping, slicing, or pouring. Experiences difficulty with recipe following.

	<p>following.</p> <ul style="list-style-type: none"> ○ Can heat, re-heat, and/or order food independently, but is unable to independently prepare meals. ○ Unable to order and/or prepare meals sufficient for nutritional intake. ○ Is completely dependent upon assistance for alimentation, including tube feedings. 	<ul style="list-style-type: none"> ○ Can heat, re-heat, and/or order food independently, but is unable to independently prepare meals. ○ Unable to order and/or prepare meals sufficient for nutritional intake. ○ Is completely dependent upon assistance for alimentation, including tube feedings.
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Activity	Before Incident	After Incident
Housekeeping	<ul style="list-style-type: none"> ○ Independently handles all tasks related to household care. Included tasks: vacuuming, lawn care, dusting, sweeping, etc. ○ Needs minor assistance with heavy items such as refuse removal or furniture moving for vacuuming, but otherwise independent. ○ Needs assistance with physically intensive tasks such as lawn care or deep cleaning, but can independently perform light or daily cleaning tasks. ○ Is responsible for small tasks, such as throwing own trash away or picking-up discarded items, but otherwise unable to perform housekeeping tasks. ○ Employs household services. ○ Completely or nearly completely unable to perform household tasks at an adequate level of cleanliness. 	<ul style="list-style-type: none"> ○ Independently handles all tasks related to household care. Included tasks: vacuuming, lawn care, dusting, sweeping, etc. ○ Needs minor assistance with heavy items such as refuse removal or furniture moving for vacuuming, but otherwise independent. ○ Needs assistance with physically intensive tasks such as lawn care or deep cleaning, but can independently perform light or daily cleaning tasks. ○ Is responsible for small tasks, such as throwing own trash away or picking-up discarded items, but otherwise unable to perform housekeeping tasks. ○ Employs household services. ○ Completely or nearly completely unable to perform household tasks at an adequate level of cleanliness.

Activity	Before Incident	After Incident
Laundry	<ul style="list-style-type: none"> Independently carry, insert/remove, and handle all aspects of laundering. Needs assistance carrying, but can handle all other tasks of laundering. Needs assistance for most physical tasks of laundry. Requires verbal or other reminders about laundry-related tasks such as moving loads, adding soap, etc. Completely unable to launder independently. 	<ul style="list-style-type: none"> Independently carry, insert/remove, and handle all aspects of laundering. Needs assistance carrying, but can handle all other tasks of laundering. Needs assistance for most physical tasks of laundry. Requires verbal or other reminders about laundry-related tasks such as moving loads, adding soap, etc. Completely unable to launder independently.

Activity	Before Incident	After Incident
Transportation	<ul style="list-style-type: none"> Travels within the community completely independently via self-driven vehicle or public transportation. Can independently arrange travel via paid taxi or related service, but is unable to travel otherwise. Travels with another person accompanying on public transportation. Travels as a passenger only with a trusted person operating the vehicle. Can travel via public transportation with reminders or cues such as provided funds, maps, or other aids. 	<ul style="list-style-type: none"> Travels within the community completely independently via self-driven vehicle or public transportation. Can independently arrange travel via paid taxi or related service, but is unable to travel otherwise. Travels with another person accompanying on public transportation. Travels as a passenger only with a trusted person operating the vehicle. Can travel via public transportation with reminders or cues such as provided funds, maps, or other aids.

	<ul style="list-style-type: none"> Is completely or nearly unable to travel in the community. 	<ul style="list-style-type: none"> Is completely or nearly unable to travel in the community. Completely unable to handle financial matters and has experienced repercussions as a result.
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Activity	Before Incident	After Incident
Medication Management	<ul style="list-style-type: none"> Medication is independently managed, to include taking the right doses of the right medication at the right times/intervals. Digital or other reminders are used to assure medication is taken correctly, but can be done absent other assistance. Medication must be prepared by another, but can then be taken independently. Assistance is required in the form of verbal reminder to take medications as directed. Medication is frequently forgotten, and non-compliance may be an issue due to cognitive process changes. Medication must be delivered directly at the exact time and in the correct dose required to ensure medication compliance. 	<ul style="list-style-type: none"> Medication is independently managed, to include taking the right doses of the right medication at the right times/intervals. Digital or other reminders are used to assure medication is taken correctly, but can be done absent other assistance. Medication must be prepared by another, but can then be taken independently. Assistance is required in the form of verbal reminder to take medications as directed. Medication is frequently forgotten, and non-compliance may be an issue due to cognitive process changes. Medication must be delivered directly at the exact time and in the correct dose required to ensure medication compliance.

Activity	Before Incident	After Incident
Shopping/Provision	<ul style="list-style-type: none"> Shopping and/or the provision of needed goods is done independently 	<ul style="list-style-type: none"> Shopping and/or the provision of needed goods is done independently

Life Care Plan for Haysbert, JoAnn | 40 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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Exhibit B

	<p>and without pain.</p> <ul style="list-style-type: none"> ○ Shopping and/or the provision of needed goods is done independently, though pain creates some difficulty. ○ Shopping and/or the provision of needed goods is done independently, though items are frequently forgotten or incorrectly purchased. (products bought w/o a need, or those not typically purchased, etc.) ○ Shopping trips require accompaniment to provide oversight and aid in supply acquisition. ○ Shopping trips require accompaniment to provide physical support, such as lifting, carrying and/or ambulation assistance. ○ Completely unable to shop or adequately provide supplies for daily life. 	<p>and without pain.</p> <ul style="list-style-type: none"> ○ Shopping and/or the provision of needed goods is done independently, though pain creates some difficulty. ○ Shopping and/or the provision of needed goods is done independently, though items are frequently forgotten or incorrectly purchased. (products bought w/o a need, or those not typically purchased, etc.) ○ Shopping trips require accompaniment to provide oversight and aid in supply acquisition. ○ Shopping trips require accompaniment to provide physical support, such as lifting, carrying and/or ambulation assistance. ○ Completely unable to shop or adequately provide supplies for daily life.
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Activity	Before Incident	After Incident
Sexual Health	<ul style="list-style-type: none"> ○ Sexual health (stamina, drive, arousability, ect.) is seemingly within normal limits and is not a cause of concern. ○ Reductions in sexual wellness and/or performance are experienced. ○ Reductions in sexual stamina and/or arousability are experienced. ○ Hyper or increased sexual impulses, arousal, desires and/or related changes are experienced. 	<ul style="list-style-type: none"> ○ Sexual health (stamina, drive, arousability, ect.) is seemingly within normal limits and is not a cause of concern. ○ Reductions in sexual wellness and/or performance are experienced. ○ Reductions in sexual stamina and/or arousability are experienced. ○ Hyper or increased sexual impulses, arousal, desires and/or related changes are experienced.

	<ul style="list-style-type: none"> Sexual dysfunction has been clinically diagnosed. 	<ul style="list-style-type: none"> Sexual dysfunction has been clinically diagnosed.
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Summary: Prior to the fall and blow to the head, Dr. Haysbert was completely independent in her activities of daily living and instrumental activities of daily living. Following this incident, Dr. Haysbert has struggled to maintain independence in her functioning. While outwardly she has not required assistance from others to perform physical tasks, she has struggled with less obvious changes. Spots in her visual fields and changes in her ability to discern high tones on a hearing test have both been noted. She has had difficulty finding words and must take extra time to enunciate clearly. Additionally, she has found herself plagued with fatigue despite maintaining her typical sleep patterns and achieving a sufficient number of sleep hours. Dr. Haysbert describes concern about difficulty remembering whether or not she has taken her medications. She intends to purchase a pill organizer yet notes that she has forgotten to do so to date. Dr. Haysbert further indicates that she has always enjoyed cleaning and keeping her home neat and tidy. Since the fall, she has noticed she does not have interest in completing related tasks. As a result, she now relied upon others to assist with heavier cleaning chores. Her lack of interest has extended into cooking activities as well. While she once found cooking an enjoyable task, she has lost the desire to do so at home. Instead, she eats on campus and brings meals home from the dining hall to avoid the need to cook for herself. Collectively, these changes have disrupted Dr. Haysbert's ability to navigate her activities with the ease and confidence she once possessed.

IMPACT OF INJURIES ON COMPLEX TASKS

Dr. Haysbert has a personal and professional history reflective of strong cognitive abilities. Regrettably, these were negatively impacted as a result of her fall and blow to the head on May 23, 2018. She has become quite forgetful, struggling to focus and concentrate while in conversation with others. As a result, she has begun taking copious notes and asking colleagues to repeat statements during their meetings. Dr. Haysbert is newly overwhelmed by complex issues at the workplace, which were once perceived as welcome challenges for her. Now, simply attempting to solve a problem in a puzzle book is a source of frustration.

IMPACT ON FAMILY WELL-BEING

After the injuries sustained, the dynamic within Dr. Haysbert's family has changed. Because she lived with her daughter until just a few months prior to this writing, her daughter became very aware of and concerned about Dr. Haysbert's changed abilities. Her daughter attempted to find activities to keep her mother engaged and challenged but quickly became aware of the level of frustration Dr. Haysbert has been experiencing. Dr. Haysbert expresses belief that her own irritability has impacted her relationship with this daughter, noting that her daughter brought up

her concerns and would not have done so if this was not causing strain. As a result, Dr. Haysbert began excusing herself from the room so that she would not subject her daughter to these periods of irritability. Dr. Haysbert's mother also lived with her until a few months prior to this writing. She notes that her irritability extended into her relationship with her mother as well, raising concern for her that she was being disrespectful to her mother.

Dr. Haysbert's other adult children have additionally been impacted with growing worry about their mother. Simultaneously, Dr. Haybert has been making every effort to not burden her children with her own concerns about the cognitive deficits and irritability she has been experiencing. She keeps telephone calls short and texts rather than making calls in an attempt to protect her family and resulting from a newly formed preference to keep to herself. All family members, including Dr. Haysbert, are grappling with these differences, which are quite disruptive to the life of this once dynamic and engaging academic professional and her children.

LONG-TERM COMPLICATIONS OF TRAUMATIC BRAIN INJURY

Due to the severity of Dr. Haysbert's injury(ies) and/or medical condition(s), he/she is at substantial risk for developing many or all of the complications listed below. These complications will require additional treatments and therapies that are above and beyond listed in this Life Care Plan.

Complication	Deficits	Impairment Level	Provider
Abulic Syndrome	Motor, cognitive, emotional, affective, and motivational apathy. ⁹	Mild to severe	Dr. Huma Haider
Aging/Cerebral Atrophy	Predisposes individuals to accelerated degeneration of the brain. ¹	Mild to severe	Dr. Huma Haider
Akathisia	Affects the ability to generate or control movements. ²	Mild to severe	Dr. Huma Haider
Ballism / Chorea	Affects the ability to generate or control movements. ²	Mild to severe	Dr. Huma Haider
Behavioral Disturbances	Often result in significantly poorer outcomes, including responses to rehabilitation, employment and psychosocial functioning and	Mild to severe	Dr. Huma Haider

Life Care Plan for Haysbert, JoAnn | 43 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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	community reintegration.		
Chronic Traumatic Encephalopathy	Decrease in memory, executive function, attention, learning, dementia, depression, anxiety, suicidal tendencies, irritability, hopelessness, apathy, explosiveness, violence, impulsiveness, having a short fuse, aggression, Parkinsonism, Ataxia, and Dysarthria	Mild to severe	Dr. Huma Haider
Disinhibition Syndrome	Interpersonal disinhibition, poor social judgement, and impulsive decision making. ⁹	Mild to severe	Dr. Huma Haider
Dysexecutive Syndrome	Significant difficulties in planning and organization, monitoring, and shifting. ⁹	Mild to severe	Dr. Huma Haider
Dystonia	Affects the ability to generate or control movements. ²	Mild to severe	Dr. Huma Haider
Emotional Dysregulation	Difficulty modulating emotions and emotional responses. ¹¹	Mild to severe	Dr. Huma Haider
Insomnia	Difficulty falling asleep, difficulty staying asleep, fatigue, irritability, cognitive deficits, and pain. ⁴	Mild to severe	Dr. Huma Haider
Myoclonus	Involuntary muscle jerking. ¹¹	Mild to severe	Dr. Huma Haider
Parkinsonism	Affects the ability to generate or control movements. ²	Mild to severe	Dr. Huma Haider
Post-traumatic Epilepsy	Alteration in behavior or consciousness, and/or body movements.	Mild to severe	Dr. Huma Haider
Post-traumatic Headache	Migraine headaches, tension type headaches, neuritic	Mild to severe	Dr. Huma Haider

	pain, musculoskeletal headaches, cervicogenic headaches, dysautonomic headaches, sinus headaches, and temporomandibular joint dysfunction syndrome.		
Post-traumatic Hypopituitarism	Can develop glucocorticoid dysfunction, growth hormone deficiency, gonadotropin deficiency, thyroid stimulating hormone deficiency, and diabetes insipidus. ¹⁰	Mild to severe	Dr. Huma Haider
Post-traumatic Stress Disorder	Depression frequently co-occurs.	Mild to severe	Dr. Huma Haider
Tics And Tourettism	Affects the ability to generate or control movements. ²	Mild to severe	Dr. Huma Haider
Tremors	Affects the ability to generate or control movements. ²	Mild to severe	Dr. Huma Haider

LEADING IMPRESSIONS

DIAGNOSES

- Post-traumatic headache
- Mild traumatic brain injury with neurocognitive deficits
- Speech abnormalities
- Anxiety disorder
- Post-traumatic vertigo and balance disorder
- Visual disturbances
- Hyperacusis
- Motor vehicle collision
- Injury of the head
- Aneurysm of internal carotid artery
- Coronavirus infection
- Long-haul syndrome
- Fatigue

Life Care Plan for Haysbert, JoAnn | 45 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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Exhibit B

- Arthralgias
- Contusion of left temporal area
- Wrist pain (left)
- Shoulder pain (left)
- Contusion of shoulder (left)
- Contusion of wrist (left)
- Abnormality to vitreous humor of both eyes
- Polyp of colon
- DJD of hand
- Acute sciatica

DISABILITIES POST-INJURY

The following is a list of disabilities that Dr. Haysbert acquired after her fall and blow to the head on May 23, 2018. Disability is used here to describe any kind of impairment to Dr. Haysbert's past individual capacity.

- Decreased ability to process complex information.
- Decreased ability to focus and concentrate on tasks, leading to the need to have colleagues repeat responses to her questions.
- Decreased ability to participate in social and religious activities, such as going to church, due to concerns about scrutiny of her cognitive performance.
- Decreased ability to manage stressful situations, leading to irritability and frustration.
- Decreased ability to perform at the level at which she is accustomed in her chosen profession.
- Decreased ability to express self accurately due to word-finding difficulties.
- Decreased ability to perceive her environment accurately due to periodic spots noted within her visual fields.
- Decreased ability to achieve restorative sleep despite adequate sleep hours.
- Decreased ability to form and maintain relationships due to lack of interest and difficulty relating to others.
- Decreased ability to perform previously enjoyed household tasks, such as housekeeping and cooking, due to lack of interest.
- Decreased ability to manage health needs, such as medications, due to forgetfulness.
- Chronic pain due to persistent post-traumatic headaches.

LIFE EXPECTANCY

Dr. Haysbert was born in 1948. As a 73 (72.8) year-old female, she can anticipate a statistical life expectancy of 88 years. The Future Medical Requirements section will calculate treatment

Life Care Plan for Haysbert, JoAnn | 46 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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Exhibit B

according to the potential years left of life remaining, as elucidated from both the most recent National Vital Statistics reports in combination with the Social Security Administration's Life Expectancy Calculator. According to the averaged amounts of the aforementioned, Dr. Haysbert will have approximately 15.2 (15) years of life left; thus, this plan will be calculated for 15 more years.

FUTURE MEDICAL REQUIREMENTS

Serious bodily injury has caused physical pain, mental anguish, physical impairment, past and future medical expenses, loss of earning capacity, loss of services, and loss of consortium. Dr. Haysbert will incur significant future medical expenses as a result of the above injuries and disabilities. The goal herein is to restore maximal physiological and cognitive function to maintain an adequate quality of life in all aspects.

This section will consist of all of the future medical requirements that I have recommended based on my examination of Dr. Haysbert, and what other healthcare providers have recommended for Dr. Haysbert. The requirements will be divided into categories and listed accordingly, along with their corresponding CPT and HCPCS codes. In regards to some recommendations no codes were applicable due to the nature of the recommendation, e.g housekeeping services. In such cases you will find an n/a or a blank instead of a code.

Provider Recommendations:

I have created this life care plan and made recommendations based on my education, training, professional experience and expertise after a review of Dr. Haysbert's records and a thorough examination.

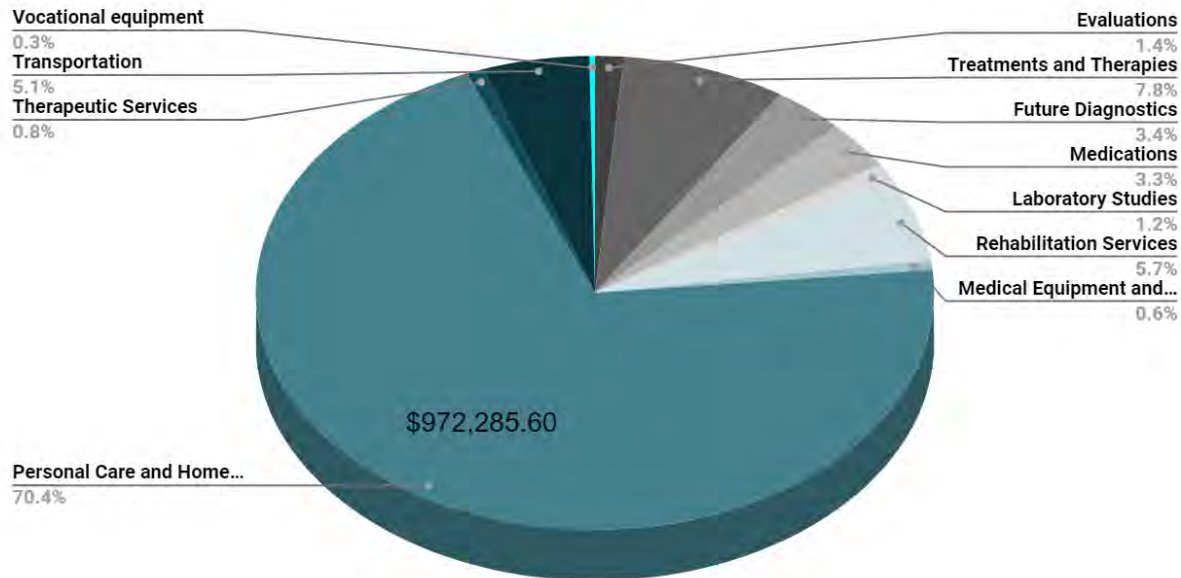
With this Life Care Plan I aim to fulfill the following objectives:

1. To reduce or eliminate any physical, neurocognitive and psychological pain and suffering.
2. To reach and maintain the highest level of function given Dr. Haysbert's unique circumstances and ailments.
3. To prevent complications to which Dr. Haybert's unique physical and mental conditions predispose her.
4. To afford Dr. Haysbert the best possible quality of life in light of her condition after her injury.³

SUMMARY OF COSTS

Future Medical Requirements for Dr. Haysbert		
Category	Cost	Percentage of Total
Evaluations	\$18,733.40	1.36%
Treatments and Therapies	\$108,301.20	7.84%
Future Diagnostics	\$47,508.28	3.44%
Medications	\$45,073.25	3.26%
Laboratory Studies	\$16,769.70	1.21%
Rehabilitation Services	\$78,988.80	5.72%
Medical Equipment and Supplies	\$8,000.87	0.58%
Home Alterations and Furnishings	\$1,054.77	0.08%
Personal Care and Home Services	\$972,285.60	70.35%
Therapeutic Services	\$11,580.00	0.84%
Transportation	\$70,012.80	5.07%
Vocational equipment	\$3,693.87	0.27%
TOTAL	\$1,382,002.54	100.00%

SUMMARY COSTS



EVALUATIONS

Service	CPT Code
Internal Medicine	99214
Traumatic Brain Injury Specialist	99214
Ophthalmologist	92012
Optometry (ocular function screening)	99172

TREATMENTS AND THERAPIES

Treatment/ Therapy	CPT
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Life Care Plan for Haysbert, JoAnn | 49 of 100

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Exhibit B

33 point Botox Injections	64615
Neurocognitive Rehabilitation	97130
Neuropsychological Evaluation	96132, 96133

FUTURE DIAGNOSTICS

Service	CPT
Diffusion Tensor Imaging	70554
MRI of the Brain w/o contrast	70551
SPECT Scan	78803

MEDICATIONS

Medication	Type
Tylenol 325 mg	Analgesic
Alpha Lipoic Acid (ALA) 100 mg daily	Supplement
CoEnzyme Q10 100 mg daily	Antioxidant
Fish Oil/Omega 3 Supplements 2-3 grams daily	Supplement
Glucoraphanin 15 mg	Supplement
Magnesium L Threonate 1-2 grams daily	Supplement
N-Acetyl Cysteine 150 mg daily	Antioxidant

Phosphatidylserine (PS) 100 mg daily	Supplement
Vitamin D3 50,000 IU every week	Supplement
Cefaly Device	Headache Relief
Cefaly Electrodes	Headache Relief

LABORATORY STUDIES

Service	CPT
Complete Blood Count (CBC)	85025
Comprehensive Metabolic Panel	80053
Urinalysis	81001

REHABILITATION SERVICES

Service	CPT
Cognitive/Behavioral Therapy	90832
Gym Membership	n/a
Occupational Therapy	97530
Work Hardening	97546
Speech/Language Therapy	92507

MEDICAL EQUIPMENT AND SUPPLIES

Equipment/ Supply	CPT/ HCPCS
Heating Pad	E0210

Life Care Plan for Haysbert, JoAnn | 51 of 100

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Exhibit B

Ice Pack	A9273
Reacher	A9281
Bed hand rails	E0310
Ear plugs	N/A
Rose-tinted glasses	N/A
Pillbox; digital with reminder function	N/A
Notebooks, calendar, Post-Its, etc.; annual allotment	N/A

HOME ALTERATIONS AND FURNISHINGS

Equipment/ Furnishing	CPT/HCPCS
Bathtub Safety Rail	E0241
Hand-held Showerhead	E1399
Shower Chair	E0240
Shower Hose	E1399
Toilet Safety Rail	E0243

PERSONAL CARE AND HOME SERVICES

Service	CPT/HCPCS
Home Health Aide, living tasks; 2 hours weekly	99509

TRANSPORTATION

Service	CPT/HCPCS
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Ambulatory Services - Non-emergency transportation: taxi/medical transport vehicle, one-way trip	A0100
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THERAPEUTIC SERVICES

Service/Therapy	CPT/ HCPCS
Recreational Therapy	97535

VOCATIONAL EQUIPMENT

Device	Purpose
High contrast keyboard	To aid in visual ease for typing.
Wireless, ergonomic mouse	To prevent strain and provide ease of use.
Blue light blocking screen protector	To prevent blue light from reaching the eyes, preventing migraines and eye strain.
White Board	To use for quick note recording and reminders

Recording Device	To record information presented orally for later reflection (meetings, calls, etc.)
Large calendar	To maintain a highly visible schedule of events

COST DATA/ VENDOR SOURCES

This section will elaborate on the average unit cost for each future medical requirement and the vendor sources that are referenced. When available the CPT or HCPCS codes were used to calculate the cost for each service, item, procedure, and visit. In the cases when no code was available a retail website was used as a vendor, and it will be listed below the CPT or HCPCS code. For services like housekeeping that have no codes associated with them, they will be calculated based on Dr. Haysbert's zip code 23669 and proximal service providers. To provide the most accurate price point, the prices recorded present an average of prices found from two or more sources, three when available, local to Dr. Haysbert's specified zip code. Prices established for medication costs are the mean elucidated from combining the costs of both generic and brand formulations. When no brand or generic is available, such is stated. By averaging prices stated by three or more sources carrying the generic version of the required drug, and three or more sources of the brand name of the exact same drug, the most accurate reflection of potential cost is given.

Each bulleted item in the sections below is accompanied by its CPT or HCPCS code and unit cost for that service, item, unit, procedure, or visit, where applicable.

VENDOR SOURCES

- GoodRx:** An online website listing drugs and their associated average costs based upon geographical location; Dr. Haysbert's zip code is utilized for more accurate price insight. Where product is unavailable, or when insufficient data exists for the specified location, a geographically close metropolitan or area is utilized.
- FAIR Health Consumer:** An online source that provides cost information based on CPT and HCPCS codes. The costs are displayed from the perspective of an insured individual or an uninsured individual. In this plan only the uninsured costs were used to

Life Care Plan for Haysbert, JoAnn | 54 of 100

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Exhibit B

calculate the costs for future medical requirements and include related fees and/or costs. This source allows you to search prices for individual zip codes; Dr. Haysbert's zip code was input to most accurately depict cost. Where costs/services are unavailable in the stated zip code, a geographically close metropolitan or area is used.

3. **Medical Fees 2021:** A physical book published by the Practice Management Information Corporation. The costs are based on a UCR 75th percentile of medical fees reported nationwide as of 2021 and are used, where applicable and recorded, as one of the three sources utilized to ascertain average cost. GAF is not applied; straight fees as reported are utilized.
4. **Retail Websites:** Amazon, CVS Pharmacy, Medline, Home Depot, Overstock, SourceOrtho, Walmart, CVS, and Walgreens, and others as listed in specific sections under 'source' were used to calculate the costs for the services/items that had HCPCS Codes, as well as medication costs where applicable, specifically for those considered over-the-counter. Two or three of these sources were chosen, based on item/services availability, for each future medical requirement and/or medication, and were used to calculate an average cost, as delineated previously.
5. **VA Reasonable Charges, v4.215 (2021):** Fees are published annually by the U.S. Department of Veteran's Affairs to state the 80th UCR and associated payment amount for non-military seeking services within their facilities or from care providers covered. GAF may be applied in some locations as deemed appropriate.

EVALUATIONS

Service	Cost
Internal Medicine CPT: 99214 VA Reasonable Costs = \$305.99 Medical Fees = \$259.00 FAIRHealth = \$420.00	
	\$328.33

TBI Specialist CPT: 99214 VA Reasonable Costs = \$305.99 Medical Fees = \$259.00 FAIRHealth = \$420.00	\$328.33
Ophthalmology CPT: 92012 VA Reasonable Costs = \$358.48 Medical Fees = \$180.00 FAIRHealth = \$435.00	\$324.49
Optometry CPT: 99172 VA Reasonable Costs = \$149.97 Medical Fees = \$42.00 FAIRHealth = \$113.00	\$101.66

TREATMENTS AND THERAPIES

Treatment/ Therapy	Cost
33 point Botox Injections CPT: 64615 VA Reasonable Costs = \$1,107.35 Medical Fees = \$685.00 FAIRHealth = \$924.00	\$905.45

Neurocognitive Rehabilitation CPT: 97130 Medical Fees = \$55.00 FAIRHealth = \$150.00	 \$102.50
Neuropsychological Evaluation CPT: 96132, 96133 VA Reasonable Costs = \$3,863.77 NBII = \$18,000.00	 \$10,931.89

FUTURE DIAGNOSTICS

Service	Cost
Diffusion Tensor Imaging CPT: 70554 VA Reasonable Costs = \$1,552.47 Medical Fees = \$1,990.00 NBII = \$36,000.00	 \$13,180.82
MRI of the Brain and Brain Stem w/out contrast CPT: 70551 VA Reasonable Costs = \$1,552.47 Medical Fees = \$1,774.00 FAIRHealth = \$3,777.00	 \$2,367.82

SPECT Scan CPT: 78803 VA Reasonable Costs = \$4,798.19 Medical Fees = \$1,283.00 FAIRHealth = \$4,039.00	\$3,373.40
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MEDICATIONS

Medication	Brand Costs	Generic Costs	Average of costs
Tylenol 325 mg - Analgesic	Food Lion = \$3.55	Food Lion = \$3.30 Walgreens = \$3.26 Walmart = \$4.16	\$3.57
Alpha Lipoic Acid (ALA) 100 mg - Supplement	WellnessResources = \$25.60 Simply Nutrients = \$21.40 Primal Labs Store = \$47.99		\$31.66
CoEnzyme Q10 100 mg daily - Antioxidant	Swanson Health Products = \$5.12 Qunol = \$28.00 iHerb = \$31.00		\$21.37
Fish Oil/Omega 3 Supplement s 2-3 grams with food daily - Supplement	Bronson Vitamins = \$19.99 Life Extension = \$30.38 Wellness Resources = \$35.20		\$28.52
Glucoraphan in 15 mg - Supplement	iHerb = \$26.97 Supersmart.com = \$59.00 Natural Healthy Concepts =		\$43.41

	\$44.25		
Magnesium L Threonate 1-2 grams daily - Supplement	Bestvite = \$28.80 Life Extension = \$25.65 Piping Rock Health Products = \$44.81		\$33.09
N-Acetyl Cysteine 150 mg daily - Antioxidant	Puritan's Pride = \$3.99 The Vitamin Shoppe = \$23.99 GNC = \$14.99		\$14.32
Phosphatidylserine (PS) 100 mg daily-Supplement	iHerb = \$35.63 Natural Healthy Concepts = \$34.95 GNC = \$16.99		\$29.19
Vitamin D3 50,000 IU every week-Supplement	Bronson Vitamins = \$19.99 Viva Naturals = \$14.99 iHerb = \$8.14		\$14.37
Cefaly Device - Headache Relief	Cefaly.com = \$499.00		\$499.00
Cefaly electrodes - Headache Relief	Cefaly.com = \$25.00 (3pk)		\$25.00

LABORATORY STUDIES

Service	Cost
---------	------

Complete Blood Count (CBC) - CPT: 85025 VA Reasonable Costs = \$174.91 Medical Fees = \$47.00 FAIRHealth = \$195.00	\$138.97
Comprehensive Metabolic Panel - CPT: 80053 VA Reasonable Costs = \$400.37 Medical Fees = \$91.00 FAIRHealth = \$428.00	\$306.46
Urinalysis - CPT: 81001 VA= \$139.69 Medical fees = \$50.00 FAIRHealth = \$151.00	\$113.56

REHABILITATION SERVICES

Service	Cost
Cognitive/Behavioral Therapy CPT: 90832 VA Reasonable Costs = \$339.50 Medical fees = \$130.00 FAIRHealth = \$469.00	\$312.83

Gym Membership n/a Anytime Fitness = \$32.99 Planet Fitness = \$22.99 Snap Fitness = \$45.00	\$33.66
Occupational Therapy CPT: 97530 Medical fees = \$81.00 FAIRHealth = \$156.00	\$118.50
Work Hardening CPT: 97546 Medical fees = \$184.00 FAIRHealth = \$505.00	\$344.50
Speech/Language Therapy CPT: 92507 Medical fees = \$151.00 FAIRHealth = \$334.00	\$242.50

MEDICAL EQUIPMENT AND SUPPLIES

Equipment/ Supply	Cost
Heating Pad HCPCS: E0210 VA Reasonable Costs = \$129.31 Amazon = \$29.99 Diabetes Store = \$6.95	\$55.42
Ice Pack HCPCS: A9273 VA Reasonable Costs = \$25.39 AllegroMedical = \$3.49 Healthy You = \$8.83	\$12.57

Reacher HCPCS: A9281 VA Reasonable Costs = \$51.08 4Md Medical = \$11.30 AllegroMedical = \$27.24	\$29.87
Bed Rails HCPCS: E0130 VA Reasonable Costs = \$303.23 PHC Online = \$209.90 Rite Aid = \$139.99	\$217.71
Ear Plugs HCPCS: n/a Quiet On noise cancelling = \$199.95 Erasears = \$49.99 SleepMake = \$19.90	\$89.95
Rose-Tinted Glasses (non-prescription) HCPCS: n/a Theraspecs = \$ 248.00 Theraspecs= \$99.00 Felix Gray = \$95.00	\$147.33
Pillbox; digital N/A Hero = \$49.99 MedMinder = \$49.99 Med-E-Lert XL = \$99.95	\$66.64
Notebooks, calendars, Post-Its; etc. N/A Annual Allotment = \$150.00	\$150.00

HOME ALTERATIONS AND FURNISHINGS

Equipment/ Furnishing	Cost
Bathtub Safety Rail HCPCS: E0241 VA Reasonable Costs = \$106.39 AMAZON = \$59.99 AmeraProducts = \$67.48	\$77.95
Hand-held Shower head HCPCS: E1399 VA Reasonable Costs = \$86.06 AMAZON = \$25.97 Home Depot = \$134.80	\$82.27
Shower Chair HCPCS: E02040 VA Reasonable Costs = \$137.70 AMAZON = \$49.99 BuyMedical.com = \$21.99	\$69.89
Shower Hose HCPCS: E1399 VA Reasonable Costs = \$86.06 AMAZON = \$13.49 Wideksail Online = \$7.77	\$35.77
Toilet Safety Rails, 2 count HCPCS: E0243 VA Reasonable Costs = \$136.25 AMAZON = \$56.99 4Md Medical = \$63.89	\$85.71

PERSONAL CARE AND HOME SERVICES

Service	Cost
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Home Health Aide, varied - cost listed in 'cost' box represents one unit/hour. HCPCS: 99509 VA Reasonable Costs = \$295.26 FAIRHealth = \$328.00	\$311.63
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TRANSPORTATION

Service	Cost
Ambulatory Services - Non-emergency transportation: taxi HCPCS: A0100 VA Reasonable Fees = \$28.88 FAIRHealth = \$16.00	\$22.44

THERAPEUTIC SERVICES

Service/ Therapy	Cost
Recreational Therapy (ADL) CPT: 97535 Medical Fees = \$73.00 FAIRHealth = \$120.00	\$96.50

VOCATIONAL EQUIPMENT

Device/ Equipment	Cost
-------------------	------

High Contrast Keyboard CDW = \$16.99 Best Buy = \$19.99 Walmart = \$11.95	\$16.31
Wireless, ergonomic mouse Human Solution = \$108.00 amazon = \$27.99 Office Depot = \$23.99	\$53.33
Blue light blocking screen protector Verishop = \$56.00 goop = \$56.00 LowBlueLights.com = \$49.00	\$53.67
White Board Uline = \$45.00 Global Industries = \$92.95 Zuma Office Supply = \$65.99	\$67.98

Recording Device Sony BX Series 4 GB = \$42.99 Coby 8 GB = \$39.99 Sony PX 4 GB = \$47.99	\$43.66
Large calendar for scheduling Walmart = \$5.00 At-A-Glance = \$12.99 Calendars.com = \$7.99	\$8.66

COST ANALYSIS

The following cost analysis exhibits the Future Medical Requirements for Dr. Haysbert and their associated monetary value. The information in the sections titled Future Medical Requirements and Cost Data/ Vendor Sources were used to calculate these total costs.

VARIABLES

The following variables are used to calculate the number of visits/items/services Dr. Haysbert will require for the remainder of his life.

VARIABLES

- 1. Age at which recommendations are pursued**
- 2. Quantity of visits/items/services**
- 3. Duration of treatment/use in years**
- 4. Cost per visit/items/services** (Listed independently in the Future Medical Requirements Section)

PARAMETERS CONSIDERED

The following variables were references and used as a basis to calculate the total costs.

- 1. Age - 73 (72.8)**

2. **Sex - F**
3. **Life Expectancy - 88**

SUMMARY RESTATEMENT OF LEADING IMPRESSIONS

The following impressions are factors that support the necessity of the Future Medical Requirements listed in this plan.

DIAGNOSIS

- Post-traumatic headache
- Mild traumatic brain injury with neurocognitive deficits
- Speech abnormalities
- Anxiety disorder
- Post-traumatic vertigo and balance disorder
- Visual disturbances
- Hyperacusis
- Motor vehicle collision
- Injury of the head
- Aneurysm of internal carotid artery
- Coronavirus infection
- Long-haul syndrome
- Fatigue
- Arthralgias
- Contusion of left temporal area
- Wrist pain (left)
- Shoulder pain (left)
- Contusion of shoulder (left)
- Contusion of wrist (left)
- Abnormality to vitreous humor of both eyes
- Polyp of colon
- DJD of hand
- Acute sciatica

DISABILITIES

- Decreased ability to process complex information.
- Decreased ability to focus and concentrate on tasks, leading to the need to have colleagues repeat responses to her questions.

- Decreased ability to participate in social and religious activities, such as going to church, due to concerns about scrutiny of her cognitive performance.
- Decreased ability to manage stressful situations, leading to irritability and frustration.
- Decreased ability to perform at the level at which she is accustomed in her chosen profession.
- Decreased ability to express self accurately due to word-finding difficulties.
- Decreased ability to perceive her environment accurately due to periodic spots noted within her visual fields.
- Decreased ability to achieve restorative sleep despite adequate sleep hours.
- Decreased ability to form and maintain relationships due to lack of interest and difficulty relating to others.
- Decreased ability to perform previously enjoyed household tasks, such as housekeeping and cooking, due to lack of interest.
- Decreased ability to manage health needs, such as medications, due to forgetfulness.
- Chronic pain due to persistent post-traumatic headaches.

EVALUATIONS

Item/ Service	Purpose	Beginni ng Age (Years)	Ending Age	Life Expecta ncy (Years)	Quantity (Units)	Frequen cy (Every "x" Year)	Duration (Years)	Total Cost	Referrin g Provider
Internal Medicine	Evaluate and treat for any adult diseases	73	88	88	2	1	15	\$9,849.90	Dr. Huma Haider MD
Traumati c Brain Injury Specialis t	Manage ment of TBI and related sequelae , to include referral	73	88	88	1	1	15	\$4,924.95	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 68 of 100

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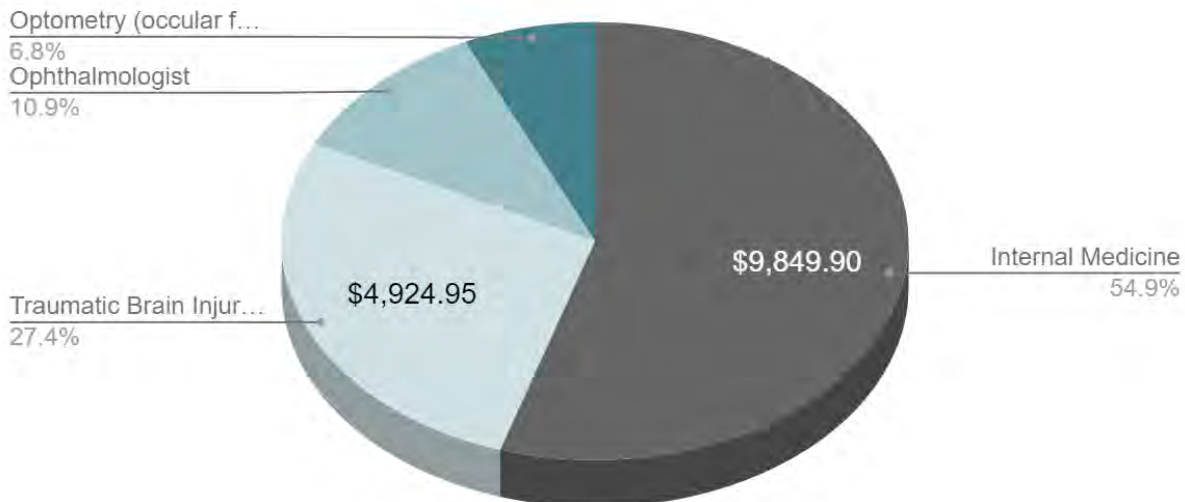
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Exhibit B

Ophthalmologist	Evaluation and treatment for disorders and diseases of the eye.	73	88	88	1	2	15	\$2,433.70	Dr. Huma Haider MD
Optometry (ocular function screening)	Examination of the eyes and evaluate the need for corrective lenses.	73	88	88	1	1	15	\$1,524.85	Dr. Huma Haider MD
TOTAL COST								\$18,733.40	

Evaluations

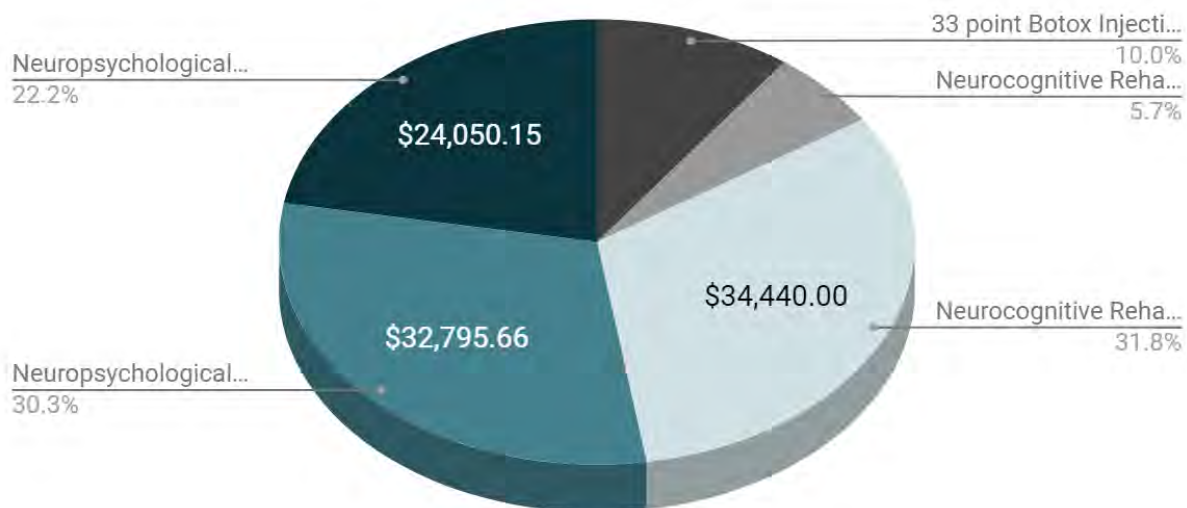


TREATMENTS AND THERAPIES

Item or Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x" Year)	Duration (Years)	Total Cost	Recommending Provider
33 point Botox Injections	Relieve post-traumatic headaches.	73	85	88	1	1	12	\$10,865.40	Dr. Huma Haider MD
Neurocognitive Rehabilitation, year 1	Treat Traumatic Brain Injury w/ Neurocognitive Deficits	73	74	88	60	1	1	\$6,150.00	Dr. Huma Haider MD
Neurocognitive Rehabilitation, year 2 onward	Treat Traumatic Brain Injury w/ Neurocognitive Deficits	74	88	88	24	1	14	\$34,440.00	Dr. Huma Haider MD
Neuropsychological Evaluation, first 3 years	To assess the level of impairment to cognitive, behavioral, motor, and executive functioning.	73	76	88	1	1	3	\$32,795.66	Dr. Huma Haider MD

Neuropsychological Evaluation, year 4 onward	To assess the level of impairment to cognitive, behavioral, motor, and executive functioning.	77	88	88	1	5	11	\$24,050.15	Dr. Huma Haider MD
TOTAL								\$108,301.20	

Treatments and Therapies



FUTURE DIAGNOSTICS

Life Care Plan for Haysbert, JoAnn | 71 of 100

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Exhibit B

Item/ Service	Purpose	Beginni ng Age	Ending Age	Life Expecta ncy (Years)	Quantity (Units)	Frequen cy (Every "x" Year)	Duration (Years)	Total Cost	Referrin g Provider
Diffusion Tensor Imaging	To visualize and evaluate white matter tracts in the brain.	73	85	88	1	5	12	\$31,633. 98	Dr. Huma Haider MD
MRI of the Brain w/o contrast	To produce detailed images of the brain and the brain stem.	73	88	88	1	5	15	\$7,103.4 7	Dr. Huma Haider MD
SPECT Scan	To produce images of the brain with more granularit y.	75	88	88	1	5	13	\$8,770.8 3	Dr. Huma Haider MD
TOTAL COST	\$47,508.28								

Life Care Plan for Haysbert, JoAnn | 72 of 100

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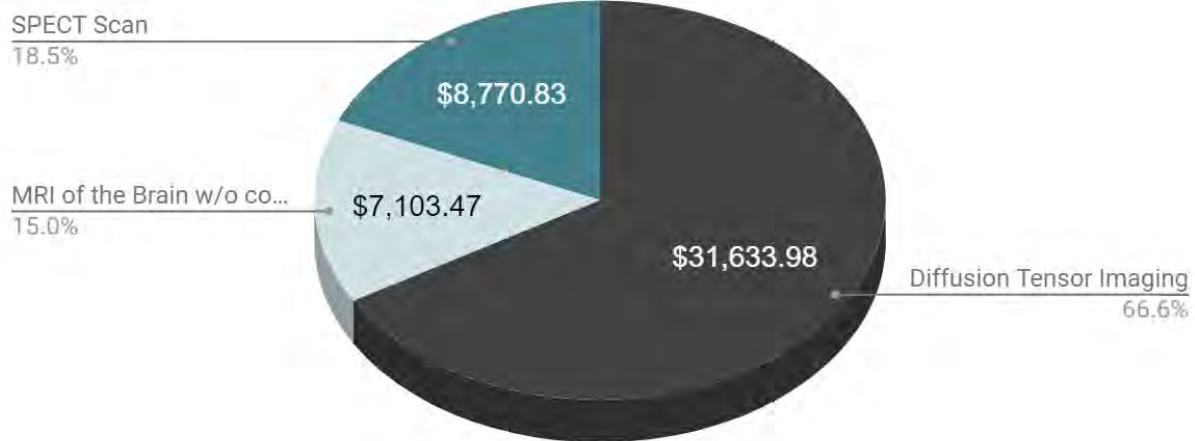
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Exhibit B

Future Diagnostics



MEDICATIONS

Item/Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x" Year)	Duration (Years)	Total Cost	Referring Provider
Tylenol 325 mg	Used to treat pain	73	83	88	6	1	10	\$214.05	Dr. Huma Haider MD
Alpha Lipoic Acid (ALA) 100 mg daily	Used to treat nerve damage	73	88	88	12	1	15	\$5,699.40	Dr. Huma Haider MD
CoEnzyme Q10 100 mg daily	Generate energy in cells	73	88	88	12	1	15	\$3,847.20	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 73 of 100

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Exhibit B

Fish Oil/Omega 3 Supplements 2-3 grams daily	Used to lower blood pressure, reduce inflammation and manage heart disease	73	88	88	12	1	15	\$5,134.20	Dr. Huma Haider MD
Glucoraphanin 15 mg	Helps to decrease brain aging	73	88	88	12	1	15	\$7,813.20	Dr. Huma Haider MD
Magnesium L Threonate 1-2 grams daily	Helps to decrease brain aging	73	88	88	12	1	15	\$5,955.60	Dr. Huma Haider MD
N-Acetyl Cysteine 150 mg daily	Used to regulate cellular functions	73	88	88	12	1	15	\$2,578.20	Dr. Huma Haider MD
Phosphatidylserine (PS) 100 mg daily	Used for brain health	73	88	88	12	1	15	\$5,254.20	Dr. Huma Haider MD
Vitamin D3 50,000 IU every week	Used for vitamin D deficiency	73	88	88	12	1	15	\$2,587.20	Dr. Huma Haider MD
Cefaly Device	To prevent and treat headaches	73	83	88	1	1	10	\$4,990.00	Dr. Huma Haider MD
Cefaly Electrodes	To be used in conjunction	73	83	88	4	1	10	\$1,000.00	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 74 of 100

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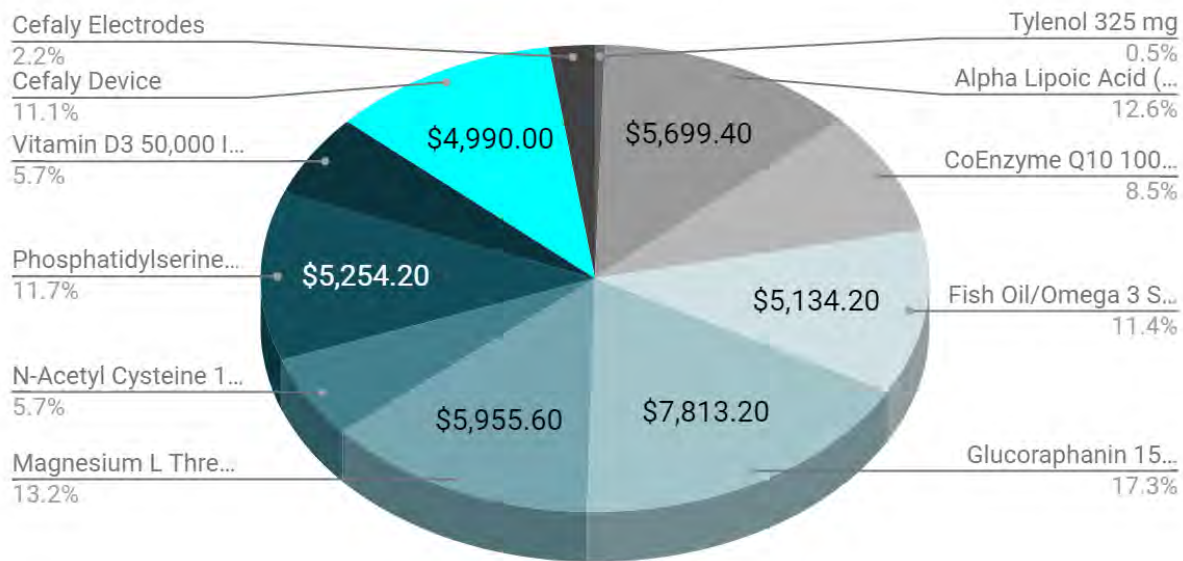
Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

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Exhibit B

	on with Cefaly device								
TOTAL COST	\$45,073.25								

Medications



LABORATORY STUDIES

Item/ Service	Purpose	Beginni ng Age	Ending Age	Life Expecta ncy (Years)	Quantity (Units)	Frequen cy (Every "x" Year)	Duration (Years)	Total Cost	Recomm ending Provider
Comple te Blood Count (CBC)	To evaluate overall health	73	88	88	2	1	15	\$4,169.10	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 75 of 100

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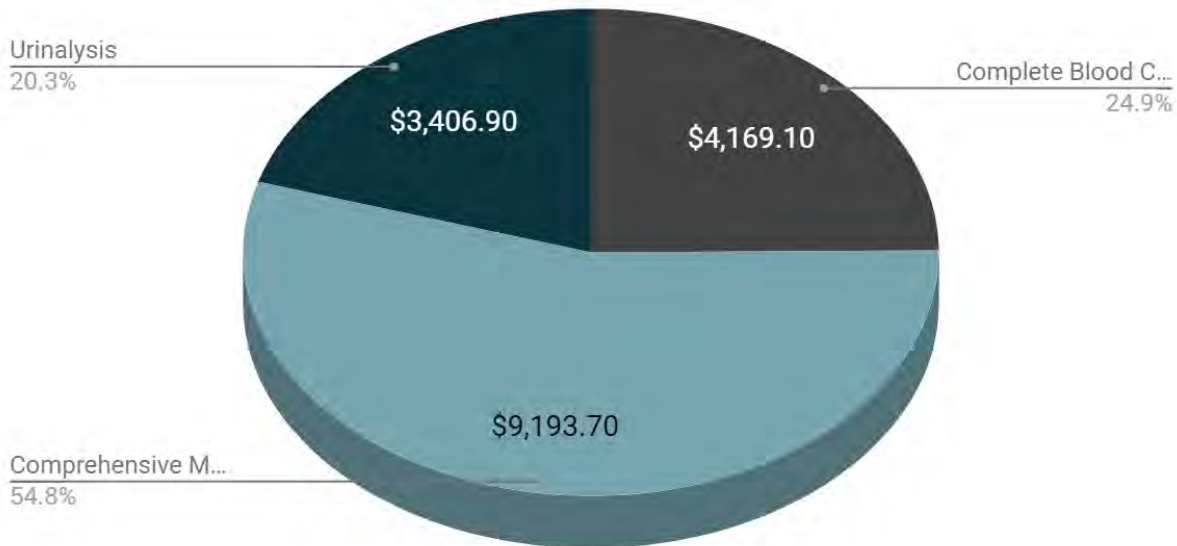
Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

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Exhibit B

	and detect a wide range of disorders .								
Comprehensive Metabolic Panel	A series of 14 tests, serving as a screening tool.	73	88	88	2	1	15	\$9,193.70	Dr. Huma Haider MD
Urinalysis	To test for the presence of disease, drugs, etc.	73	88	88	2	1	15	\$3,406.90	Dr. Huma Haider MD
TOTAL								\$16,769.70	

Laboratory Studies



REHABILITATION SERVICES

Item/Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x" Year)	Duration (Years)	Total Cost	Referring Provider
Cognitive/Behavioral Therapy	A type of psychotherapy that challenges negative patterns of thought about the	73	75	88	12	1	2	\$7,508.00	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 77 of 100

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Exhibit B

	self and the world.								
Gym Members hip	Physical training and exercise for recovery of brain and bodily well-being.	73	88	88	12	1	15	\$6,058.80	Dr. Huma Haider MD
Occupational Therapy, acute period	Therapy for individuals and family recuperating from physical or mental illness in the immediate or acute period.	73	74	88	36	1	1	\$4,266.00	Dr. Huma Haider MD
Occupational Therapy, long-term	Therapy for individuals and family recuperating from physical or mental illness for long-term and/	74	88	88	12	1	14	\$19,908.00	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 78 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

San Antonio: 8235 S New Braunfels Ave, Ste 101, San Antonio, TX 78223

Exhibit B

	continue d recovery.								
Work Hardenin g	To aid in a return to pre-injury work level in a safe, timely manner with professio nal oversight .	73	74	88	24	1	1	\$8,268.00	Dr. Huma Haider MD
Speech/ Languag e Therapy, acute	Training to help individual s with speech and language problems during the immediat e or acute period.	73	74	88	24	1	1	\$5,820.00	Dr. Huma Haider MD
Speech/ Languag e Therapy, long-ter m	Training to help individual s with speech and language problems in the long-ter m period	74	88	88	8	1	14	\$27,160.00	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 79 of 100

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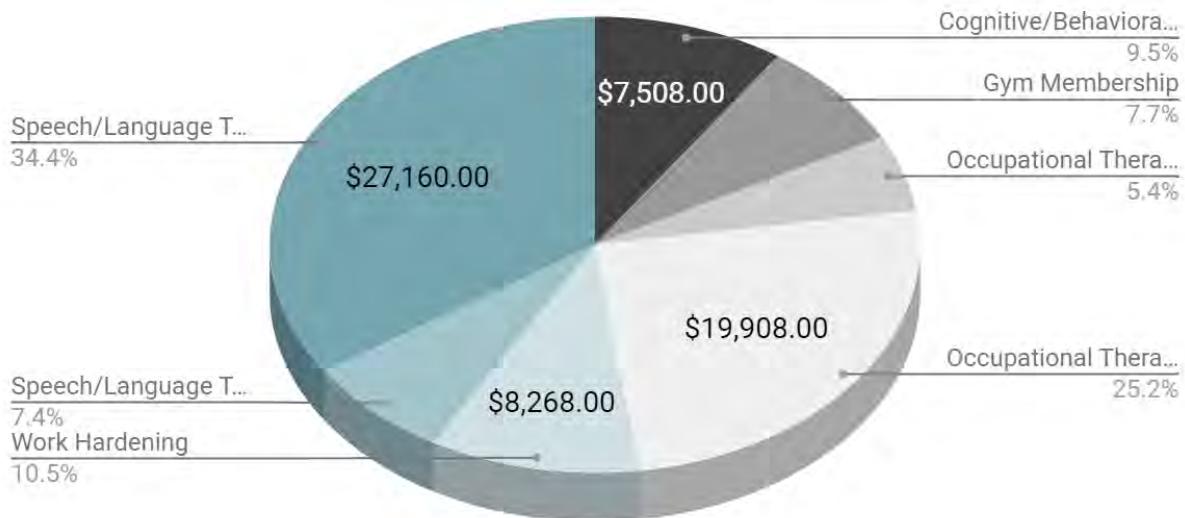
Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

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Exhibit B

	and/or ongoing for continued recovery.								
TOTAL COST	\$78,988.80								

Rehabilitation Services



MEDICAL EQUIPMENT AND SUPPLIES

Item/Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x" Year)	Duration (Years)	Total Cost	Referring Provider
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Life Care Plan for Haysbert, JoAnn | 80 of 100

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Exhibit B

Heating Pad	To provide relief of pain.	73	88	88	1	1	15	\$831.30	Dr. Huma Haider MD
Ice Pack	To provide relief to pain and reduce inflammation.	73	88	88	6	1	15	\$1,131.30	Dr. Huma Haider MD
Reacher	To aid in accessing hard to reach places.	73	88	88	1	5	15	\$89.61	Dr. Huma Haider MD
Bed hand rails	To aid in safe rising and lowering.	73	88	88	2	5	15	\$1,306.26	Dr. Huma Haider MD
Ear plugs	To block noise and alleviate phonophobia or sensitivity to sound	73	88	88	1	1	15	\$1,349.25	Dr. Huma Haider MD
Rose-tinted glasses	To block blue light and alleviate photophobia and associated concerns	73	88	88	1	1	15	\$2,209.95	Dr. Huma Haider MD
Pillbox; digital	To aid in medication	73	88	88	1	3	15	\$333.20	Dr. Huma

Life Care Plan for Haysbert, JoAnn | 81 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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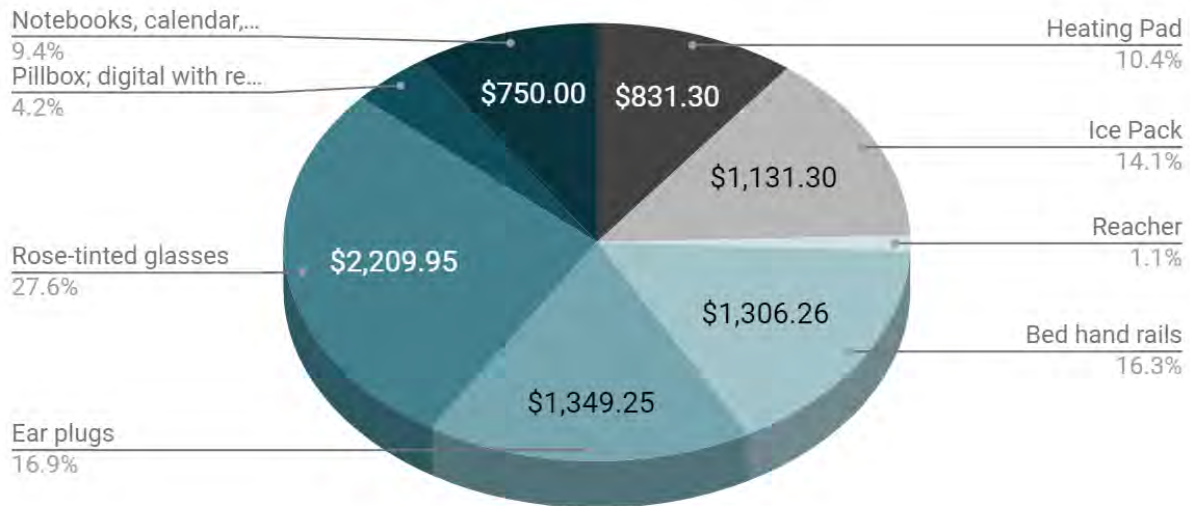
Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

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Exhibit B

with reminder function	on compliance								Haider MD
Notebooks, calendar, Post-Its, etc.; annual allotment	Aids for information recall and recording	73	88	88	1	3	15	\$750.00	Dr. Huma Haider MD
TOTAL COST								\$8,000.87	

Medical Equipment and Supplies



HOME ALTERATIONS AND FURNISHINGS

Item/Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x")	Duration (Years)	Total Cost	Referring Provider
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Life Care Plan for Haysbert, JoAnn | 82 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

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Exhibit B

						Year)			
Bathtub Safety Rail	To provide stability when the individual is bathing.	73	88	88	1	5	15	\$233.85	Dr. Huma Haider MD
Hand-held Showerhead	To facilitate bathing by providing easy water accessibility.	73	88	88	1	5	15	\$246.81	Dr. Huma Haider MD
Shower Chair	To allow for sitting while the individual is sitting.	73	88	88	1	5	15	\$209.67	Dr. Huma Haider MD
Shower Hose	To facilitate bathing by providing easy water accessibility.	73	88	88	1	5	15	\$107.31	Dr. Huma Haider MD
Toilet Safety Rail	Aids individual with stability when bathing and toileting.	73	88	88	1	5	15	\$257.13	Dr. Huma Haider MD
TOTAL COST								\$1,054.77	

Life Care Plan for Haysbert, JoAnn | 83 of 100

Houston: 6065 Hillcroft St, Ste 202, Houston, TX 77081

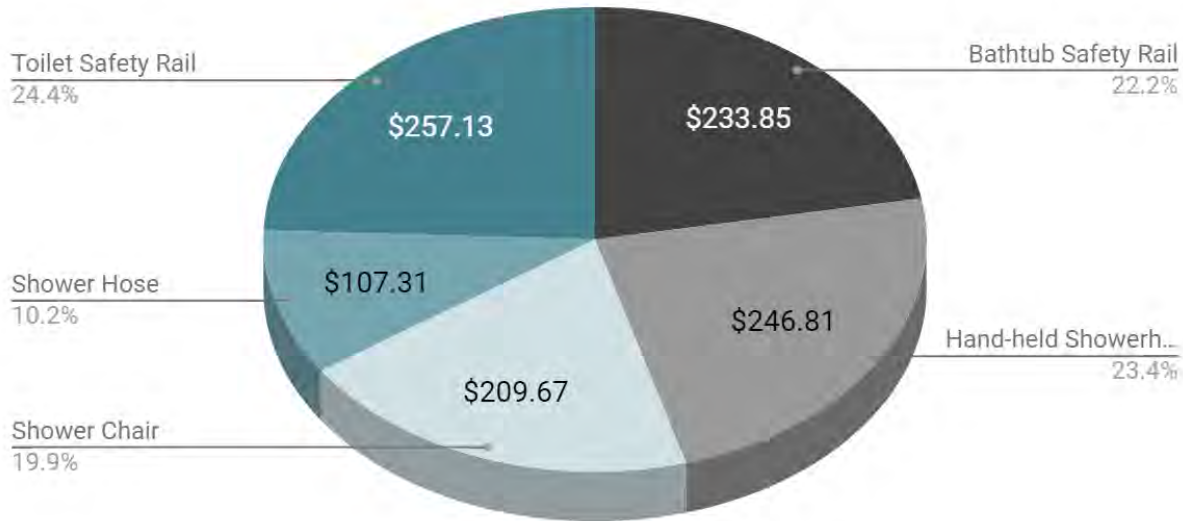
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Exhibit B

Home Alterations and Furnishings



PERSONAL CARE AND HOME SERVICES

Item/Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x" Year)	Duration (Years)	Total Cost	Referring Provider
Home Health Aide, living tasks; 2 hours weekly	To assist with activities of daily living and personal care.	73	78	88	104	1	5	\$162,047.60	Dr. Huma Haider MD
Home Health Aide, living	To assist with activities of daily	78	83	88	208	1	5	\$324,095.20	Dr. Huma Haider MD

Life Care Plan for Haysbert, JoAnn | 84 of 100

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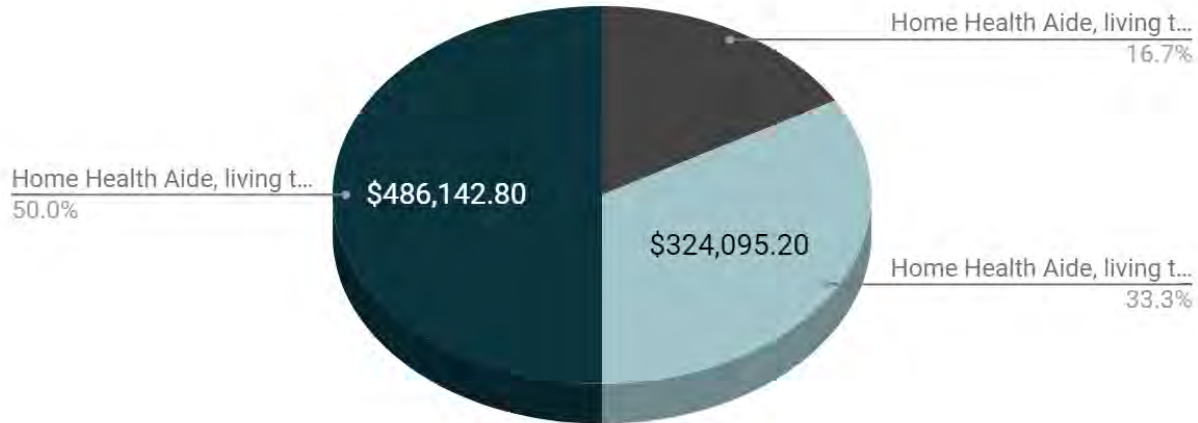
Los Angeles: 3530 Wilshire Blvd, Ste 1180, Los Angeles, CA 90010

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Exhibit B

tasks; 4 hours weekly	living and personal care.								
Home Health Aide, living tasks; 6 hours weekly	To assist with activities of daily living and personal care.	83	88	88	312	1	5	\$486,142.80	Dr. Huma Haider MD
TOTAL COST	\$972,285.60								

Personal Care and Home Services



TRANSPORTATION

Item/Service	Purpose	Beginning Age	Ending Age	Life Expectancy (Years)	Quantity (Units)	Frequency (Every "x")	Duration (Years)	Total Cost	Referring Provider
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Life Care Plan for Haysbert, JoAnn | 85 of 100

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Exhibit B

						Year)			
Ambulatory Services - Non-emergency transportation: taxi/medical transport vehicle, one-way trip	To aid patient in transportation.	73	88	88	208	1	15	\$70,012.80	Dr. Huma Haider MD
TOTAL COST								\$70,012.80	

Transportation



THERAPEUTIC SERVICES

Item/ Service	Purpose	Beginni ng Age	Ending Age	Life Expecta ncy (Years)	Quantity (Units)	Frequen cy (Every "x" Year)	Duration (Years)	Total Cost	Recomm ending Provider
Recreati onal Therapy	To strengthe n skills in self-care and home manage ment	73	78	88	24	1	5	\$11,580. 00	Dr. Huma Haider
TOTAL								\$11,580.00	

Therapeutic Services

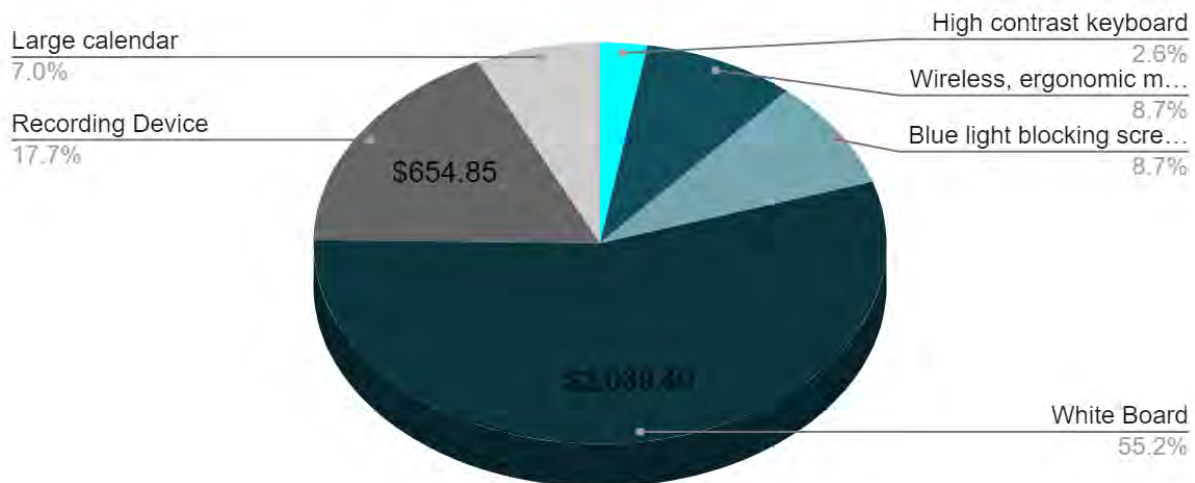


VOCATIONAL EQUIPMENT

Item/ Service	Purpose	Beginni ng Age	Ending Age	Life Expecta ncy (Years)	Quantity (Units)	Frequen cy (Every "x" Year)	Duration (Years)	Total Cost	Recom mending Provider
High contrast keyboard	To aid in visual ease for typing.	73	88	88	2	5	15	\$97.86	Dr. Huma Haider, MD
Wireless, ergonomi c mouse	To prevent strain and provide ease of use.	73	88	88	2	5	15	\$319.96	Dr. Huma Haider, MD
Blue light blocking screen protector	To prevent blue light from reaching the eyes, preventin g migraine s and eye strain.	73	88	88	2	5	15	\$322.00	Dr. Huma Haider, MD
White Board	To use for quick note recording and reminder s	73	88	88	2	1	15	\$2,039.40	Dr. Huma Haider, MD

Recording Device	To record information presented orally for later reflection (meetings, calls, etc.)	73	88	88	1	1	15	\$654.85	Dr. Huma Haider, MD
Large calendar	To maintain a highly visible schedule of events	73	88	88	2	1	15	\$259.80	Dr. Huma Haider, MD
TOTAL								\$3,693.87	

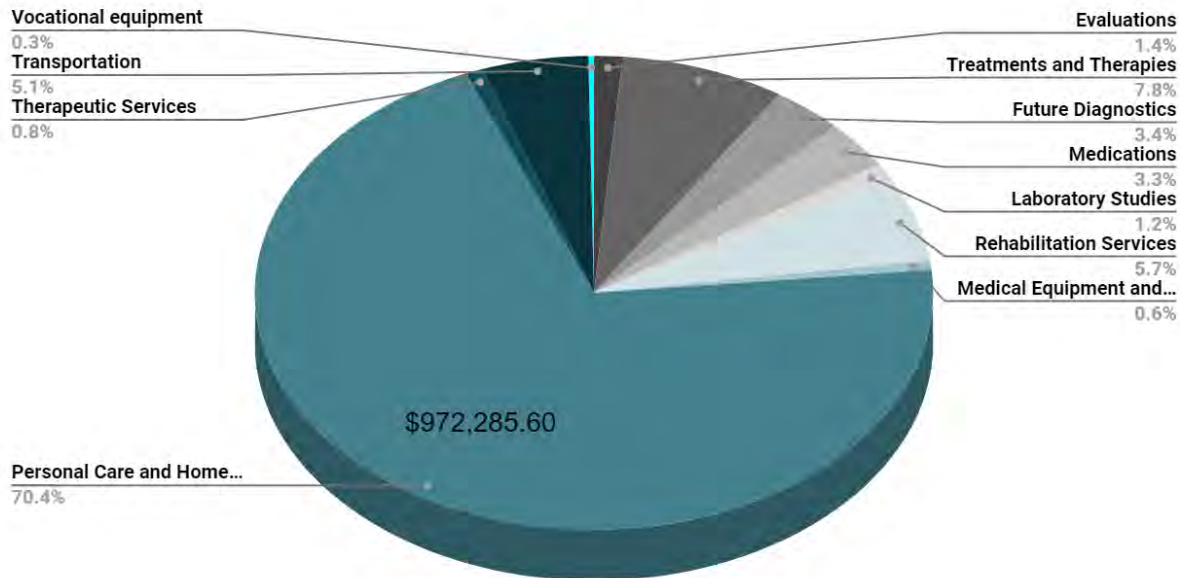
Vocational/ Accessibility Equipment



SUMMARY

Future Medical Requirements for Dr. Haysbert		
Category	Cost	Percentage of Total
Evaluations	\$18,733.40	1.36%
Treatments and Therapies	\$108,301.20	7.84%
Future Diagnostics	\$47,508.28	3.44%
Medications	\$45,073.25	3.26%
Laboratory Studies	\$16,769.70	1.21%
Rehabilitation Services	\$78,988.80	5.72%
Medical Equipment and Supplies	\$8,000.87	0.58%
Home Alterations and Furnishings	\$1,054.77	0.08%
Personal Care and Home Services	\$972,285.60	70.35%
Therapeutic Services	\$11,580.00	0.84%
Transportation	\$70,012.80	5.07%
Vocational equipment	\$3,693.87	0.27%
TOTAL	\$1,382,002.54	100.00%

SUMMARY COSTS



In summary, Dr. Haysbert suffered a fall and a blow to the head on May 23, 2018. She now suffers from numerous deficits -- cognitive, psychiatric, psychological, emotional, and physical. She has neurocognitive deficits, and while improvements may be made, with a reasonable degree of medical probability, a majority of these deficits are more likely than not permanent in nature. The above recommendations that I and the other providers and/or professionals have made will aid Dr. Haysbert in recuperation and in her healthcare management. With this Life Care Plan, I aim to provide a clear plan that will provide Dr. Haysbert with the best possible quality of life despite her condition.

I make these statements with a reasonable degree of medical probability, and caring for individuals with various disorders, including TBI. Should any additional information become available to me in this case other than what I have received, I reserve the right to alter or adjust the opinions expressed above.

Thank you for allowing me to participate in Dr. Haysbert's care after her injuries. If I can be of further assistance, please don't hesitate to contact me.



Huma Haider, MD
Director, National Brain Injury Institute

Board Certified Neurocritical Care through United Council of
Neurologic Subspecialties (UCNS)

Board Certified in Headache Medicine through United Council of
Neurologic Subspecialties (UCNS)

Board Certified in Headache Medicine through American Board of
Headache Medicine (ABHM)

Board Certified in Internal Medicine through American Board of
Internal Medicine (ABIM)

Board Certified in Anesthesiology through American Board of
Anesthesiology (ABA)

Certified Life Care Planner (CLCP)

Certified Independent Medical Examiner (CIME) through American
Board of Independent Medical Examiners (ABIME)

REFERENCES AND CONSULTED MATERIALS

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Huma Haider, MD

713-628-0098, Email: hhaider@nationalbii.com

CERTIFICATIONS/MEMBERSHIPS

- Board Certified in Neurocritical Care through United Council of Neurological Subspecialties (UCNS)
- Board Certified in Headache Medicine through United Council of Neurological Subspecialties (UCNS)
- Board Certified in Headache Medicine through American Board of Headache Medicine (ABHM)
- Board Certified in Anesthesiology through American Board of Anesthesiology (ABA)
- Board Certified in Internal Medicine through American Board of Internal Medicine (ABIM)
- Certified Independent Medical Examiner (CIME) through American Board of Independent Medical Examiners (ABIME)
- Certified Life Care Planner (CLCP) through International Commission on Health Care Certification (ICHCC)
- Masters in General Psychology
- Board Member of Brain Injury Association of California (BIACAL)
- Member of American Psychological Association (APA)
- Member of North American Brain Injury Society
- Member of American Headache Society
- Credentialed ImPact Consultant (CIC)
- ACLS Certified

PROFESSIONAL EXPERIENCE

NATIONAL BRAIN INJURY INSTITUTE

Medical Director, March 2018 – Current

Evaluation and Management of Traumatic Brain Injury

Houston, TX

TEXAS BRAIN CENTER

Medical Director, Jan 2016 – March 2018

Concussion and Traumatic Brain Injury Program

Houston, TX



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ADVANCED DIAGNOSTICS HOSPITALS AND CLINICS

Attending Anesthesiologist, Oct 2015 – March 2018

Houston, TX

MODSCULPT MEDICAL SPA

Medical Director, March 2013 - August 2015

Sugarland, TX

MEMORIAL HERMANN HOSPITAL, SOUTHWEST

Attending Neuro Intensivist, Aug 2013 - October 2018

Houston, TX

MEMORIAL HERMANN HOSPITAL, TEXAS MEDICAL CENTER

Attending Neuro Intensivist, Aug 2013 - Dec 2015

Houston, TX

MEMORIAL HERMANN HOSPITAL, TEXAS MEDICAL CENTER

Assistant Professor of Anesthesiology, January 2013 - June 2013

Houston, TX

PROFESSIONAL TRAINING

Interventional Headache Medicine Training Course

Oct 9 2020

American Interventional Headache Society

Western Reserve Hospital

Cuyahoga Falls, OH

Neuropsychological Assessment Battery Administration Observership with Dr. Angela Larery Ph.D.

Jan 2019 - August 2019

52 Sugar Creek Blvd #300

Sugar Land, Tx, 77478

Certified Life Care Planner

Oct 2018 - Jan 2019

International Commission on Health Care Certification

13801 Village Mill Drive, Suite 103,

Midlothian, Virginia 23114

Masters Program in General Psychology



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Nov 2017 - February 2020

North Central University

Scottsdale, AZ

Interventional Headache Medicine Training Course

Oct 7-8 - 2017

American Interventional Headache Society

Northwestern Feinberg School of Medicine

Chicago, IL

Neurocritical Care Fellowship

Nov 2011 - Oct 2012

Baylor College of Medicine

St Luke's Episcopal Hospital

Houston, TX

Anesthesiology Residency

July 2008 - June 2011

John H. Stroger Hospital of Cook County

Chicago, IL

Internal Medicine Residency

July 2005 - June 2008

Advocate Illinois Masonic Medical Center

Chicago, IL

UNDERGRADUATE/POSTGRADUATE EDUCATION

Bachelor of Medicine and Bachelor of Surgery

Jan 1997 - Dec 2002

Khyber Medical College, University of Peshawar, Pakistan

Bachelor of Science

Sept 1994 - Sept 1996

Jinnah College for Women, University of Peshawar, Pakistan

ACADEMIC WORK

- Presented a lecture on “ COVID -19 and Brain Manifestations” for California Society of Industrial Medicine (CSIMS) on January 23rd, 2021
- Presented a CME lecture on “ Traumatic Brain Injury and Post-Traumatic Headaches: Diagnosis, Treatment and Management Part 2” Webinar for American Interventional Headache Society (AIHS) on January 27th, 2021
- Presented a CME lecture on “ Traumatic Brain Injury and Post-Traumatic Headaches:



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Diagnosis, Treatment and Management Part 1" Webinar for American Interventional Headache Society (AIHS) on January 13th, 2021

- Presented a CME lecture on "Traumatic Brain Injury and Post-Traumatic Headaches: Diagnosis, Treatment and Management" Webinar for American Interventional Headache Society (AIHS) on November 18th, 2020
- Presented CLE lecture on "Audiological Issues after Traumatic Brain Injury" at Brain SoCal Conference in Los Angeles, California in November 2019
- Presented CLE lecture on "Traumatic Brain Injury Diagnosis, Management and Treatment" at Annual Educational Conference at Advanced Diagnostics Hospitals in May 2017
- Presented a CME lecture on "Management of Status Epilepticus" at Memorial Hermann Hospital, Houston in March 2013
- Presented a CME lecture on the "Use of broad spectrum antibiotics in ICU" at Memorial Hermann Hospital, Houston in February 2013
- Research track for 6 months from January 2011 to June 2011. Involved in research project "Transversus Abdominis Plane Block in Patients Undergoing Abdominal Surgeries"
- Presented Scientific Abstract on "Absolute Neutral Neck Position for Internal Jugular Central Venous Cannulation in Unstable Trauma Patients" at American Society of Anesthesiology annual meeting in San Diego in October, 2010
- Presented Scientific Exhibit on "Algorithm for the Management of Emergency Airway" at American Society of Anesthesiology annual meeting in San Diego in October, 2010
- Case presentation on "Inadvertent Carotid Artery Cannulation during Internal Jugular Central Venous Cannulation" at Midwest Anesthesia Residency Conference in Columbus, Ohio in February, 2009
- Case presentation on "Anesthesia for the removal of base of chair from the rectum" at Midwest Anesthesia Residency Conference in Chicago in February, 2009
- Awarded a prize for review article presentation on "Seven Decades of Discovery of Angiotensin Converting Enzymes Inhibitors" at Midwest Anesthesia Residency Conference in Chicago in February, 2009
- Earned Scholarship for all 4 years Medical School from State of Pakistan
- Secured 6th position in the State Board Exam for the Admission into Medical Schools in the Province of NWFP
- Gold medalist from grades 1 through 12 in academics
- Founder of Khyber Thalassemia Society
- During world wide Poliomyelitis eradication, volunteered for performing immunization

PUBLICATIONS

- Published a paper in KIDNEY on Gadolinium use in Chronic Kidney Disease



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- Helped edit section on the “Emergency Airway Procedures” for the new edition of Emergency Medicine Residency Textbook
- Completed Pilot Study on “Smoking cessation in the Preoperative Patient Population”
- Completed and published a research project in Pakistan on ”Relationship between Infectious Diarrhea and Contaminated Water”

AWARDS

- Vice-President of Khyber Thalassemia Society. The members would arrange for blood from various hospitals for the families with children suffering from Thalassemia who could not afford blood transfusions
- Elected class representative during the 5 years of medical school; as a class representative expressed strong leadership and dedication
- Member of Khyber debate team. Achieved 1st and 2nd positions in various debates throughout the years.

LANGUAGES

- Urdu
- English
- Pashto

HOBBIES

- Health & Fitness
- Traveling
- Gastronomics

REFERENCES

- References furnished upon request



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NBII Standard Services - Fees and Payment terms Effective May 18, 2021

Comprehensive Neurological Evaluation (CNE)

1. History & Physical, comprehensive interview, apraxia assessment, and neurocognitive assessment
2. Treatments and medications are prescribed as needed.
3. Detailed report describing the injury, gross and subtle deficits. Includes any recommended additional studies, imaging, or procedures that the patient needs.
4. Total charges are \$10,500 for CNE appointment; \$1,500 payment for professional services deposit required.
5. *If patient No-shows, in order to reschedule to another date, an additional \$1,000 payment for professional services will be required.*

Future Medical Report (FMR)

1. Even mild cognitive impairment, over the course of many decades of remaining life, can have cumulative and harmful impact on the patient. His/her personal life can suffer, and his/her career earning potential can decrease, sometimes to zero.
2. A report describing how the injury can impact the patient's future, both personally and professionally, and what maladies the patient is at high risk for developing in the future
3. Total charges are \$5,300.

Neuropsychological Assessment Battery (NAB)

1. 5 hour long comprehensive test/assessment of patient's brain functions: Attention, processing speed, learning, memory, intelligence, language, sensory acuity, calculation, visuospatial ability, problem-solving, judgment, abstract thinking, mood & temperament
2. Total charges are \$23,000.
3. *If patient No-shows, in order to reschedule to another date, \$2,000 payment for professional services will be required.*

Please remit payment via Credit Card over the phone or by check. Make checks out to **National Brain Injury Institute, PLLC**, and send to the following address:

NBII, Attn: Payment Processing
6161 Savoy Dr, Ste 550
Houston, TX 77036



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NBII Additional Services - Fees and Payment terms Effective May 18, 2021

Life Care Plan (LCP)

1. A document that is based upon the currently published standards of practice, comprehensive assessment, data analysis, and research, which is used to provide an organized and concise plan for the current and future needs of the patient
2. \$8,000 payment for professional services; Average total charges vary.

Subject Matter Expert Report (SMER)

1. A document with medical records reviewed, collated, and summarized, alongside recommendations issued by the provider, maximum of 1000 pages.
2. \$3,000 payment for professional services; Average total charges vary.

Comprehensive Diffusion Tensor Imaging (CDR) of the Brain

1. Imaging that allows direct in vivo examination of the damage to brain microstructure, white matter tracts, and diffuse axonal injury after Traumatic Brain Injury.
2. Total charges are \$33,500; \$8,000 payment for professional services deposit required.
 - a. Includes 3D animations of the white matter tract abnormalities found in the patient's DTI imaging of the brain.

Limited Diffusion Tensor Imaging (DTI) of the Brain

1. Imaging that allows direct in vivo examination of the damage to brain microstructure, white matter tracts, and diffuse axonal injury after Traumatic Brain Injury.
2. \$4,000 full and final payment for professional services required.

3D Animations of the Brain (3DA)

1. 3D animations of the white matter tract abnormalities found in the patient's DTI imaging of the brain.
2. Total charges are \$3,500.

Please remit payment via Credit Card over the phone or by check. Make checks out to **National Brain Injury Institute, PLLC**, and sent to the following address:

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6161 Savoy Dr, Ste 550
Houston, TX 77036



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NBII Deposition and Trial - Fees and Payment terms **Effective September 25, 2020**

Deposition/Trial Services

1. Huma Haider, MD - TBI Subject Matter Expert
2. Review of Medical Records and Literature
3. Preparation and self-study
4. Time at Deposition/Trial

Fees and Payment Terms

Deposition - \$1,000/hour

1. 6 hour minimum charge (\$6,000)
2. \$6,000 deposit retainer due in order to reserve date.
3. If between 2-6 hours, any credit will be returned within 90 days.
4. If greater than 6 hours, the balance will be billed.

Trial - \$1,000/hour

1. 8 hour minimum charge (\$8,000)
2. \$8,000 deposit retainer due in order to reserve date.
3. If between 2-8 hours, any credit will be returned within 90 days.
4. If greater than 8 hours, the balance will be billed.

Preparation Time - \$500/hour, minimum 1 hour billed in advance

Travel time - \$350/hour, billed in advance

Travel charges at cost, billed in advance

Invoice for balance sent immediately upon completion of services.

Payment due within 10 business days of receipt of invoice.

All requests for deposition will be billed to the party requesting Dr. Haider's deposition or trial testimony. Payment is ultimately guaranteed by the patient's attorney.

Cancellation policy:

≥14 days notice, deposit retainer will be fully refunded

<14 days notice, deposit retainer is non-refundable

All non-refundable travel expenses are due regardless of notice amount

Please remit payment via Credit Card over the phone or by check. Make checks out to **National Brain Injury Institute, PLLC**, and send to the following address:

NBII, Attn: Payment Processing
6161 Savoy Dr, Ste 550
Houston, TX 77036



Testimony Experience* of Dr. Huma Haider of the National Brain Injury Institute

**Prior experience under former organizations not included in this list*

6/23/2021

Firm	Attorney	Case Name	Type of Testimony	Date
Jim S. Adler & Associates	Langdon "Trey" Smith	Sheila Foulch Gamez vs. Pinnacle Driveway, Inc. and Lekorie Kentrez Pearson	Deposition	10/24/2018
Jim S. Adler & Associates	Frank Robertson	Richard Swiger vs. Travelers Casualty Insurance Company of America and Sandra Marie Sullivan	Deposition	11/12/2018
Amaro Law Firm	James Amaro	Mark Brown, v. ECCL 4:12, LLC and NEXTGEN PARKING, LLC,	Court Testimony	12/4/2018
Jim S. Adler & Associates	Frank Robertson	Angela Weigal and Michael Gaskamp vs. MPW Transportation Services, LLC and Jerry Dale Bohler	Deposition	1/10/2019
Meade and Neese	John Neese	Tareq Khan, MD, v. CHI St. Luke's Health Baylor College of Medicine	Court Testimony	2/13/2019
Jim S. Adler & Associates	Langdon "Trey" Smith	Mario Sanders vs. BMW of North America, LLC, Gregory Thomas Grigsby	Deposition	2/15/2019
Glaze & Garrett	Jordan Glaze	Adrienne Gutierrez v. Banker Limo, LLC, Jean Youssef Jabbour and Abdul Fatah Azizi	Deposition	3/13/2019
Amaro Law Firm	Ashlee E. Dunham	Reginald Hill v. Justin Wayne Henderson d/b/a Easton Fencing, ATX Fence Supply, Inc., and SBI Industrial, LLC	Deposition	5/10/2019
Arnold & Itkin LLP	Noah Wexler	American Commercial Barge Line LLC		
		Kinder Morgan Marine Services, LLC	Deposition	5/20/2019
Jim S. Adler & Associates	Frank Robertson	Elizabeth Montenegro and Ismael Sala, Individually and as Next Friend of I.C., a Minor v. Gilbreath Transportation, LLC and Juan Enrique Pleitez	Deposition	8/27/2019
Glaze & Garrett	Jordan Glaze	Helena Lara vs. Sunset Express, Inc and Jose Trinidad Cortez	Deposition	9/16/2019
Arnold & Itkin LLP		Ernest Martinez	Court Testimony	10/21/2019
Pusch & Nguyen Law Firm, LLP	Anthony Akins Pusch	Tony Tran And Quy Vu vs. Jonathan Emerson Osteen, Joel Osteen and Victoria Osteen	Deposition	10/28/2019
Loncar Associates	Stephanie Baenisch	Brad D. Campbell vs. Silverado Interests, LLC, Silverado Interests Management, LLC, Silverado Interests Management II, LLC, Silverado Interests Holdings, LLC, The Ridgemont Company, DBA Ridgemont Commercial Construction, Hunt Properties, Inc, Wax 77 GP, LLC., SI Wax 77 Retail, LP, HP Wax 77 Partners, LP, Wax 77 Investors, LP, Academy, LTD, AKA Academy Sport & Outdoors, Academy Managing Co, LLC, and New Academy Holding Company LLC, AKA New ASO Holding Company, LLC	Deposition	1/10/2020
Lovelady Law Office	Jeffrey D Boyd	Louis Daily and Aaron Glick v. HD Supply, Inc, and Micahel A. Garvey	Deposition	1/20/2020
Larry G Trimble	Trimble & Grant	Mark Gass v. Darling Ingredients, Inc. and Ramon Fuentes, Jr, Individually	Deposition	1/24/2020
Watts Guerra, LLP	Jorge L. Mares	Andres Carrales and William Moreno vs. LL Consultants, Laredo Energy Operating, LLC and Juan Alfonso Cordova	Deposition	1/27/2020
Lovelady Law Office	Jeffrey D Boyd	Louis Daily and Aaron Glick v. HD Supply, Inc, and Micahel A. Garvey	Deposition	2/3/2020
Morrell Law Firm	Christopher L Morrell	Claudia Behm vs. U.S. Reif Sawyer Heights Lofts Texas, LLC and Greystar Real Estate Partners, LLC	Deposition	2/10/2020
Villareal & Begum, PLLC	Bryan Shoeppy	Maria Munguia v. Elias Carmona Jr. and Bew Leasing, LLC	Deposition	2/17/2020
The Gonzalez Law Group	Kevin Acevedo	Jesus Trevino, Individually, Karina Trevino, Jesus Trevino A/N/F A.T., A.T., and A.T., Minors v. Stephen B. Mcelroy	Deposition	2/21/2020
Jim S. Adler & Associates	Scott R. Frase	Andrea Turtur vs. Karel Fuentes and R&S Concrete, L.L.C.	Deposition	6/8/2020
Macdonald Devin Ziegler Madden Kenefick & Harris, P.C.	David Macdonald	Ruston Emmons v. Stanley Automotive Enterprises, Stanley Ford Eastland Dealership, And Riley Cannon	Deposition	6/15/2020
The Packard Law Firm	Daniel W. Packard	Mustafa Ali Abdulla Al Nomani v. Key Energy Services, LLC and Terrance Lee Williams	Deposition	6/22/2020
Jim S. Adler & Associates	Scott R. Frase	Jesus Barrera, Sr. vs Frontier Logistics, L.P., et Al	Deposition	6/26/2020
Frenkel & Frenkel, LLP	Jason Boorstein	Robert W. Barrett, Jr., v. Robert A. Speer and Schneider National Carrers, Inc.,	Deposition	7/27/2020
Law Offices of J. Robert Davis, P.C.	J. Robert Davis	Jason Carpenter v. Michael Ray Newby, Individually and D/B/A M&N Logistics, LLC, Doug Latham and Sheree Lissette Hill Latham	Deposition	7/31/2020

Brown Sims, P.C.	Robert M Browning	John Diaz, v. Belco Industrial Services, LLC and Northwes Mechanical, INC	Deposition	8/14/2020
Cotton, Bledsoe, Tighe & Dawson	Matt Catalano	Basillio Chavez, and Antonio Espino, vs. Zachary Andrew Thompson and EDP Renewables North America LLC	Deposition	8/17/2020
Thompson, Coe, Cousins & Irons, L.L.P.	Joanna M. Tollenaere	John McLaurin, v. Trac-Work, Inc.	Deposition	8/21/2020
Taylor, Book, Allen & Morris, LLP	Gregory A Holloway	Mustafa Ali Abdulla Al Nomani v. Key Energy Services, LLC and Terrance Lee Williams	Deposition	9/11/2020
Jim S. Adler & Associates	Scott R. Frase	Jesus Barrera, Sr. vs Frontier Logistics, L.P., et Al	Deposition	10/2/2020
Macdonald Devin Ziegler Madden Kenefick & Harris, P.C.	David Macdonald	Ruston Emmons v. Stanley Automotive Enterprises, Stanley Ford Eastland Dealership, And Riley Cannon	Deposition	11/2/2020
Wolf & Laudicina, LTD	Steven C. Wolf	Vicky Boxlietner, and Fred Boxlietner v. Antioch Auto Parts, Inc. d/b/a/ NAPA Autoparts Antioch and Benjamin Larson, individually	Deposition	11/16/2020
Roberson, Kolker, Cooper & Goeres, P.C.	Drew A. Lagow	Ahmad Majid Alsaif v. Craig Michael Colley, Troy Wayne Bishop and Quickway Distribution Services Inc. D/B/A Quickway Transportation Inc.	Deposition	11/20/2020
Norton Rose Fulbright US LLP	Lauren Hont Brogdon	Lindseu Simon, et al. v. Lyondell Chemical Company, et al.	Deposition	1/15/2021
Shamieh Law, PLLC	Ramez F. Shamieh	Kelly Cook v. Meghan Jean Jahr and Eduardo Arturo Espino-Ortega	Deposition	2/12/2021
McKinney & Tighe	Michael McKinney	Bret Jackson Plaintiff, vs. Navitas Midstream Partners, LLC; Navitas Midstream Management, LLC; Navitas Midstream Midland Basin Holdings, LLC; Navitas Midstream, LLC; and El Paso Natural Gas Company, LLC, ET AL.	Deposition	3/1/2021
Deutsch Kerrigan, L.L.P.	Robert E. Kerrigan, JR.	Ashley Moreaux and Chris Moreaux v. Clear Blue Insurance Company, Tim Ables Trucking Company, LLC, Shannon Watson and Kevin Posey	Deposition	3/8/2021
Packard Law Firm	Daniel W. Packard	Mustafa Ali Abdulla Al Nomani Plaintiff VS. Key Energy Services, LLC and Terrance Lee Williams Defendants	Deposition	3/12/2021
Brown Sims	Michael D. Williams	Andrew Hollier V. Brown & Brown Pizza, INC. d/b/a DOMINO'S PIZZA and Clifton Walker	Deposition	4/26/2021
Norton Rose Fullbright	Lauren H. Brogdon	Lindsey Simon, et al., Plaintiffs, V. Lyondell Chemical Company, et al., Defendants	Deposition	4/30/2021
Mckinney & Tighe	Michael McKinney	Bret Jackson Plaintiff, VS. Navitas Midstream Partners, LLC; Navitas Midstream Management, LLC; Navitas Midstream Midland Basin Holdings, LLC; Navitas Midstream Midland Basin, LLC; Navitas Midstream, LLC; and El Paso Natural Gas Company, LLC, ET AL.	Deposition	5/10/2021
Williams Hart Boundas Easterby, LLP	Eloy Gaitan	Amilcar Hernandez, Plaintiff, v. Beacon Sales Acquistion, INC, and Salvador Salto Defendants.	Deposition	5/24/2021
Brown Sims	Robert M. Browning	John Stockton Plaintiff, v. Donovan R. Phillips and Advance Stores Company Incorporated d/b/a Advanced Auto Parts Defendants	Deposition	6/1/2021
Roberson, Kolker, Cooper & Goeres, P.C.	Drew A. Lagow	Ahmad Majid Alsaif v. Craig Michael Colley, Troy Wayne Bishop and Quickway Distribution Services Inc. D/B/A Quickway Transportation Inc.	Deposition	6/4/2021
Hartline Barger L.L.P.	Patrick J. Stoia	Faizan kabir Plaintiff, VS. Frank Jamison Defendant.	Deposition	6/7/2021
Weekley Schulte Valdes Murman Tonelli	Megan B. Collins	Eirin Bruheim and Nordic Lights Farm, LLC Plaintiffs, v. Mark Bellissimo, Tryon Equestrian Propeties, LLC, Tryon Equestrian Propeties No. 2, LLC, Tryon Horse Shows, LLC and Tryon Showgrounds, LLC, Defendants.	Deposition	6/11/2021

EXHIBIT C



June 22, 2021

Nazareth Haysbert
Attorney at Law
Haysbert Moultrie LLP
4640 Admiralty Way
Suite 500
Marina Del Rey, CA 90292

RE: Joann Wright Haysbert

Dear Mr. Haysbert:

The loss of earning capacity sustained by Joann Wright Haysbert is in a range of \$171,544 to \$1,328,874 stated in terms of present value. Enclosed is our report on your client.

The vocational economic assessment contains our conclusions regarding lost earnings as well as the relevant factors supporting those conclusions.

The vocational economic rationale presents both the philosophy and the methodology employed in assessing the loss. The method is used to assess earning capacity in all cases of either partial or total disability. It is the standard employed by our firm in conducting a vocational economic assessment.

The projections in this report are based on information received to date and may be updated upon receipt of additional information.

Sincerely,
VOCATIONAL ECONOMICS, INC.

For the Firm

A handwritten signature in cursive script that reads 'Enrique Vega'.

Enrique Vega, MS, CRC, CDMS

/lr



**VOCATIONAL ECONOMIC ASSESSMENT
FOR
JOANN WRIGHT HAYSBERT**

Date of Interview:	June 18, 2021
Date of Report:	June 22, 2021
Date of Birth:	September 22, 1948
Age:	72
Educational Attainment:	Doctorate Degree
Work History:	Chancellor & Provost; Executive Vice President; President; Assistant Provost for Academic Affairs; Professor and Coordinator; Dean; Assistant Vice President for Academic Affairs; Director; Assistant Professor; Educational Planner.
Date of Injury:	May 23, 2018
Nature of Injury:	Sustained injury to her hand, left shoulder, left arm, left leg and left knee as a result of a slip and fall at Outback steakhouse.
Reported Problems:	Concentration; Memory; Making decisions; Learning new material; Depression; Low frustration tolerance; Personality changes; Fatigue; Headaches; Sleeping; Following through on tasks; Organizing complex information; Word finding; Irritability; Mood swings;

Social inhibition;
Loss of interest in previous activities;
Loss of interest in social interaction;
Loss of career plans/opportunities.

Information Reviewed:

Pay Statements & Contracts;
Succession Planning Analysis;
CV of Dr. Joann W. Haysbert;
Deposition of Dr. Joann W. Haysbert;
Medical Records of National Brain Injury Institute;
Medical Records of Divine Health Care, LLC;
Medical Records of MedCare;
Medical Records of Lind W. Chinnery, MD, FACP;
Medical Records of Sentara;
Medical Records of South Carolina Medical Records.

Case Comments

Upon your request, an assessment was made of Joann Wright Haysbert's loss of capacity to perform work and earn money as a result of injury sustained on May 23, 2018. In conducting the assessment, Ms. Haysbert was interviewed on June 18, 2021 and information forwarded by your office was reviewed.

The interview and information reviewed reveal Ms. Haysbert to be a 72-year-old individual with a doctorate degree. Over her worklife, she has functioned as a chancellor & provost, executive vice president, president, assistant provost for academic affairs, professor and coordinator, dean, assistant vice president for academic affairs, director, assistant professor and an educational planner.

In May 2018, Ms. Haysbert sustained injury to her hand, left shoulder, left arm, left leg and left knee as a result of a slip and fall at Outback steakhouse. Ms. Haysbert states that as a result of injury she experiences a variety of difficulties listed above in the "Reported Problems" section of this report.

In assessing loss of lifetime earnings, a variety of issues need to be considered. Assessment of lifetime earning capacity includes consideration of pre-injury and post-injury annual earning capacity and pre-injury and post-injury worklife expectancy. Once these are determined, present value is calculated. In considering the effects of Ms. Haysbert's disability on annual earning capacity and worklife expectancy, we used data from the US Census Bureau's American Community Survey (ACS) dealing with cognitive disability.

As a result of injury, Ms. Haysbert meets the ACS definition of cognitive disability. Persons are defined as having a cognitive disability if they are identified as having difficulty

concentrating, remembering, or making decisions because of a physical, mental, or emotional condition.

Annual Earning Capacity

Ms. Haysbert's pre-injury and post-injury lifetime power to earn money is reasonably represented by her current salary of \$204,650.

The earning capacities considered for Ms. Haysbert are as follows:

Table 1 Earning Capacity

	Pre-Injury	Post-Injury
Actual Earnings	\$204,650	
Actual Earnings		\$204,650

All figures are stated in terms of 2021 dollars. In addition, fringe benefits are calculated at the rate of 14.20%, as reported in the U.S. Bureau of Labor Statistics publication "Employer Costs for Employee Compensation – December 2020."

Worklife Expectancy

Ms. Haysbert's worklife expectancies are presented in a range comprised of four scenarios.

In the first scenario, Ms. Haysbert's pre-injury worklife expectancy is like that of an average worker with a doctorate degree with no disability. Her post-injury worklife expectancy is like that of an average worker with a doctorate degree and with a non-severe cognitive disability.

In the second scenario, for pre-injury worklife expectancy, I assume that Ms. Haysbert would have worked continuously until the age of 80. Her post-injury worklife expectancy is like that of an average worker with a doctorate degree and with a non-severe cognitive disability.

The worklife expectancies that follow are for workers beginning at age 72.75:

Table 2a Worklife Expectancy (Statistical Worklife)

Education Level	Disability Status	Pre-injury	Post-injury
Doctorate Degree	No Disability	2.3 years	
	Non-severe Cognitive Disability		1.6 years

Table 2b Worklife Expectancy (Assumed Worklife)

Education Level	Disability Status	Pre-injury	Post-injury
Doctorate Degree	No Disability	7.3 years	
	Non-severe Cognitive Disability		1.6 years

Lifetime Loss

The attached Worklife Probability tables calculate Ms. Haysbert's loss of lifetime expected earnings. All figures are stated in terms of present value. It is assumed that future increases in real wage growth will be offset by the real rate of interest or discount over the remaining life expectancy.

The table below summarizes Ms. Haysbert's loss of earnings:

Table 3 Loss of Earning Capacity

Basis for Loss	Loss
Non-severe Cognitive Disability – Statistical Worklife	\$171,544
Non-severe Cognitive Disability – Assumed Worklife	\$1,328,874

The projections presented in this report are based on information received to date. Our analysis may be updated or changed upon receipt of new information and/or changes in Ms. Haysbert's condition.

VOCATIONAL ECONOMIC RATIONALE

In cases of permanent disability or death, a Vocational Economic Assessment (VEA) defines the lifetime loss of future earning capacity in terms of present value. This Vocational Economic Rationale (VER) presents both the philosophy and the methodology employed in these assessments. The method is used in cases of either partial or total disability. It is the standard employed by Vocational Economics, Inc., in conducting a VEA.

Introduction

The U.S. Supreme Court's decisions in *Daubert* (1993) and *Kumho* (1999) require that expert testimony meet the general tests of "reliability" and "relevancy." The Court, however, has recognized the inexact nature of assessments for lost earnings. In *Jones and Laughlin Steel v. Pfeifer* (1983), the Court stated that:

By its very nature the calculation of an award for lost earnings must be a rough approximation. Because the lost stream can never be predicted with complete confidence, any lump sum represents only a "rough and ready" effort to put the plaintiff in the position he would have been in had he not been injured.

More than thirty years after the *Jones and Laughlin Steel v. Pfeifer* case, one might argue that improved Census Bureau data enable the expert to provide an empirically-based "rough and ready" effort to make the plaintiff economically whole. However, the expert opinion is still an estimate. It is not an absolute statement of what will occur for a plaintiff. No such opinion could ever be stated; rather, the expert defines what probability data tell us about persons most like the plaintiff, using both the best data available and clinical judgment. It is up to the trier of fact to make the ultimate decision as to what is most probable for the plaintiff in terms of future loss of earning capacity.

As an aid to the trier of fact, experts consider available statistics on disability when developing their opinions. The data from every macro survey conducted on the impact of disability on earnings and employment reach the same conclusions. Disability, regardless of how it is defined, reduces earnings for persons employed year-round, full-time. In addition, disability reduces employment across all levels of educational attainment. Employment levels serve as one of the primary building blocks of a worklife expectancy. Therefore, worklife expectancy is reduced. The best data available emanate from U.S. government surveys on disability.

A VEA is a forecast of future lost earnings based on diminished earning capacity. In conducting the assessment, vocational and economic experts consider the unique characteristics of the individual being assessed in combination with relevant career development and economic theory. Experts apply population statistics to individuals to predict a variety of future probable occurrences.

As noted by Marcia Angell in *Science on Trial* (1997, 115):

Courtroom trials are not about populations, they are about individuals. . . . We have no basis, at least in the current state of knowledge, for making a judgment about a particular woman. We therefore *must* appeal to epidemiological data – that is, studies of populations.

As stated by Gibson (2001, 21), “Statistical averages have long been accepted as a means for prediction – life expectancy, earnings, and others – and have long been accepted for use in the courts. No statistic, no matter how fine-tuned, can provide an exact predictor of an individual's future.” Nonetheless, utilizing statistical methodologies is a powerful method for arriving at a more empirically-based opinion.

Earnings proxies and worklife expectancies are derived from average rates for various populations. Experts use available statistics about populations and apply them to meet the specifics of the case by considering how earnings or worklife expectancy statistics match the plaintiff's circumstances and characteristics. Data are used by persons who understand the principles on which they are based and the population to which they are applied.

The purpose of this VER is to define the principles underlying assessments of lost earnings as well as the methodology employed in conducting a VEA. A previous edition of this VER has been published in its entirety in the peer-reviewed journal *Estimating Earning Capacity: A Journal of Debate and Discussion* (Gamboa, Tierney, et al. 2009).

Disability Issues

The presence of a disability is widely known to affect both earnings and worklife expectancy. This finding is documented in the results of every major survey that has attempted to study the impact of disability, including:

- The Annual Social and Economic Supplement (ASEC, or the March Supplement) to the Current Population Survey (CPS), the Survey of Income and Program Participation (SIPP), and the American Community Survey (ACS) from the U.S. Census Bureau (2019);
- The monthly Current Population Survey from the U.S. Bureau of Labor Statistics and U.S. Census Bureau;
- The National Health Interview Survey (NHIS) from the National Center for Health Statistics (Harris, Hendershot and Stapleton October 2005);
- The *N.O.D./Harris Survey of Americans With Disabilities* (Harris Interactive 2000); and
- The Behavioral Risk Factor Surveillance System (BRFSS) conducted by the Centers for Disease Control and Prevention (Smith 2007)¹.

¹ In addition to the above U.S. surveys that consistently demonstrate reductions in earnings and worklife for the disability population, Canada's Participation and Activity Limitation Survey (PALS) also identifies reductions. (Crouse 2015).

The importance of tracking the employment impact of disability is highlighted in the U.S. Census Bureau's website focusing on many of the above surveys (2019).

The disability effect is the cause of such events as the passage of the Americans with Disabilities Act (ADA),² the existence of the U.S. Department of Labor's Office of Disability Employment Policy,³ and the development of the profession of rehabilitation counseling.

Defining Disability

Before measuring the effect of disability on earnings and employment, it is necessary to define what is meant by disability. Depending on the desired focus, different groups and surveys will define disability differently. Brault (2012) (U. S. Census Bureau) notes that "no one survey estimate is 'right' or 'wrong' as all surveys must make choices about the type and nature of disability they intend to measure."

As noted in *Counting Working-Age People with Disabilities*, (Houtenville, Stapleton, et al. 2009, 28), "The Interagency Committee on Disability Research (ICDR) documents 67 acts or programs that define disability." The ADA, for instance, defines disability as existing in persons with a physical or mental impairment that substantially limits one or more of the major life activities. The Veterans Administration (VA) and the Social Security Administration (SSA) each have their own definitions, which vary considerably. Haber (December 1967, 17, 20) provides a general definition of disability:

Literally interpreted, disability refers to "loss or reduction of ability." Definitions in use in clinical studies, survey research, and administrative evaluations commonly accept the loss or reduction of capacity to engage in normative role activities as the central point of reference of disability, with an origin in impairments or functional limitations resulting from disease or injury.

Haber goes on to note that:

Disability is distinguished from functional limitations by its relationship to the required capacities for the performance of normal roles and activities. Disability represents a loss or decrease in ability to respond to behavioral expectations as a result of impairments and functional limitations.

Given this basic definition, there are various surveys that provide disability data that can be useful for a calculation of lifetime earnings.

² <http://www.ada.gov/>

³ <http://www.dol.gov/odep>

Impairment – Disability – Work Disability

It is important to differentiate between the terms impairment, disability, and work disability. The lack of understanding regarding the differences between these terms is responsible for some of the criticisms leveled at work disability data.

A physician typically defines impairment. Usually anatomical in nature, impairment may be defined as a percentage of physical functional impairment to the body as a whole. It establishes permanency, which is one value of an impairment rating in cases of personal injury. Typically, if there is no permanency of impairment, there is no future lifetime loss of earning capacity. Permanency of impairment may also be established by psychologists and neuropsychologists in cases involving traumatic brain injury (TBI), other acquired brain impairment, Post Traumatic Stress Disorder (PTSD), or severe psychological disturbances.

Disability is defined as existing when an individual is limited in terms of one or more activities of daily living, but not all impairments result in a disability. A one percent permanent partial impairment to the body as a whole as a result of an amputation of the ring finger of the non-dominant hand at the distal phalangeal joint would not likely result in either a disability or a work disability. Similarly, a disability resulting from impairment does not necessarily result in a work disability. A five percent permanent partial impairment to the body as a whole relating to injury and a subsequent back fusion may or may not result in a work disability even if it limits one or more activities of daily living such as yard care, home maintenance, jogging, golfing, or snow skiing.

Note that the definition of a disability derives from functional limitations - not the injury that caused the limitations. If a person is limited in his ability to walk, the impact on his employment is driven by his inability to walk, not by whether it arose from a fall resulting in a spinal cord injury or an automobile accident resulting in amputation of his leg. Thus, this rationale focuses on employment outcomes for a given limitation. Further, one must distinguish between limitations and restrictions. Physicians often identify permanent limitations (impairments) a patient might have without restricting their activities. It is the limitations that drive the assessment of a disability, regardless of the presence of restrictions.

If the individual with a back injury and fusion is a social worker or a rehabilitation counselor, it is possible that a work disability would not exist. However, if chronic pain exists and a future fusion or fusions are probable, it is likely that a decrease in both earnings and worklife expectancy would result. Chronic pain decreases the amount of work an individual is capable of performing, which results in a decreased level of productivity (Kapteyn, Smith and Van Soest March 2006). In addition, the aging process has been shown to exacerbate the impact of disability on earnings (Gamboa and Gibson 2008) and employment (Gamboa and Gibson, Gamboa Gibson Worklife Tables Revised 2015).

Work disability is defined by the U.S. Census Bureau (1983) as existing when a condition exists that limits the amount or kind of work an individual is capable of performing because of a physical or mental impairment. This definition is narrowly constructed.⁴ It is not meant to define the

⁴ The Census Bureau later expanded this definition in the CPS, as explained later in this document.

prevalence of disability, but rather the earning and employment levels of those persons with a work disabling condition. Some argue that the data are too heterogeneous to be of value in that a wide range of physical maladies encompass the group.⁵ However, the data are homogeneous and specific to those with a work disabling condition, the very type of individual seeking compensation for future economic loss as a result of a tort. The issue of work disability is supported in a report published by the Centers for Disease Control, based on information from the 2005 SIPP categorizing disability prevalence (2009).

U.S. government surveys have been used successfully in thousands of partial disability cases over the past thirty-five plus years. As documented throughout this rationale, the data are widely used by prominent disability researchers to measure the employment impact of disability. Recognition of the use of government survey data continues to increase in numerous district court and appellate court decisions. The data serve as an excellent aid to the trier of fact in assessing economic loss in cases of partial disability.

Disability Statistics

Many surveys demonstrate the effect of disability on earnings and employment. However, few offer a sample sufficiently large to quantify this impact by multiple levels of age, education, gender, and disability status. Two robust sources of data specific to both earnings and employment levels that also provide large sample sizes are the American Community Survey (ACS) and the Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS), sometimes referred to as the March Supplement to the CPS. Both surveys allow classification of employment and earnings by age, gender, education, and disability versus non-disability status. The ASEC focuses on work disability, while the ACS examines earnings and employment from the functional perspective of mobility, cognitive, vision, hearing, and physical disability.

American Community Survey

The U.S. Census Bureau's American Community Survey (ACS), the largest annual survey in the United States, is the only source of statistics on a wide range of important characteristics for all communities (Groves 2012). As such, the Census Bureau recognizes the ACS as the preferred source for examining small geographic areas and finely detailed categories (e.g. disability) on their website under *Guidance on Differences in Employment and Unemployment Estimates from Different Sources* (2017). The survey collects data from participants by asking a series of disability-related questions. The ACS has been conducted since 2000. Since 2005, its annual sample size⁶ has been over 3 million persons per year, with annual response rates of 97 percent or more (Groves 2012).

In October of 2014, the U.S. Census Bureau published *American Community Survey: Handbook of Questions and Current Federal Uses* (October 2014). The publication provides examples of how the survey data collected are used. The disability questions are asked to understand the population with disabilities. Federal uses of the data include use by the U.S. Department of

⁵ e.g., paraplegia, amputation, back sprains, knee injuries, back injuries, etc.

⁶ The sample is 1% of the U.S. population annually, and is made available in the ACS Public Use Microdata Sample (PUMS).

Commerce, in conjunction with the Federal Communications Commission, to determine whether residential households own computers and access the internet. The U.S. Department of Health and Human Services uses the disability data collected by the ACS to determine current and projected health care services delivery needs, further noting that health status is related to employment status. In total, the report documents 75 applications of the disability questions within federal agencies alone, 11 of which focus specifically on the impact of disability on employment and earnings (October 2014, 87-96).

Prior to 2008, the ACS defined disability based on the questions in Figure 1. A physical, cognitive, or sensory disability is considered severe when problems with self-care or going outside the home are also reported. Conversely, VEI analyses consider a nonsevere disability by excluding the severe indicators and all of the other functional limitations.⁷ Because work disability is measured with the Current Population Survey, the ACS work disability question is not used in VEI analyses.

Figure 1 ACS Disability Criteria (prior to 2008)

Question	Classification
Does this person have any of the following long-lasting conditions:	
Blindness, deafness, or a severe vision or hearing impairment?	Sensory
A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?	Physical
Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:	
Learning, remembering, or concentrating?	Cognitive
Dressing, bathing, or getting around inside the home?	Self-Care
Going outside the home alone to shop or visit a doctor's office?	Go Outside Home
Working at a job or business?	Work

The U.S. Census Bureau adopted a new set of six disability questions (Figure 2) beginning with the 2008 ACS. The physical disability question from the prior survey (see Figure 1) addressed functional limitations pertaining to both the upper and lower body. Beginning in 2008, the questions were refined to be more specific (Figure 2). However, the number of questions remained limited to six. Thus not all limitations tested before 2008 could be included when splitting some former limitations into multiple questions.

The previous physical disability question was tested by both U.S. Bureau of Labor Statistics (BLS) and Census and found to be a reliable measure of disability (Brault, Stern and Raglin 2007)

⁷ For example, a nonsevere cognitive limitation excludes persons who report a yes response to any of the self-care, go outside the home, physical, or sensory questions.

Employment rates generated from the pre-2008 physical disability question will continue to be a valuable source of data with which to calculate worklife expectancy for individuals with functional limitations of the upper body (one limitation not included in the revised six questions). For our analyses, the impact of physical disability on earnings and probabilities of employment is measured by use of 2005-07 surveys (U.S. Census Bureau 2019).⁸

Using the 2008 questions, a vision, cognitive, or mobility disability is considered severe when problems with self-care or going outside the home are also reported.

Figure 2 ACS Disability Criteria (beginning 2008)

Question	Classification
Is this person deaf or does he/she have serious difficulty hearing?	Hearing
Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?	Vision
Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?	Cognitive
Does this person have serious difficulty walking or climbing stairs?	Mobility
Does this person have difficulty dressing or bathing?	Self-Care
Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping?	Go Outside Home

Bureau of Labor Statistics Adoption in Monthly CPS

The U.S. Bureau of Labor Statistics (BLS) adopted the disability questions in Figure 2 from the ACS as their official definition of disability and added them to the monthly CPS in public use data available beginning in 2009. The CPS is the primary source of data used to calculate monthly unemployment rates. This allowed the BLS to release “monthly labor force data from the CPS for persons with a disability.” (U.S. Bureau of Labor Statistics 2010)

Calculation of employment rates yielded by the 2009 - 2012 CPS monthly surveys data reveals they are generally consistent with those generated from ACS data. As noted earlier, while the new CPS monthly survey data provide valuable information about the overall employment status of persons with a disability, the much larger sample size of the ACS makes it the preferred source of data for calculating worklife expectancy. The large sample size of the ACS allows for analysis by gender, age, level of education, and disability status.

⁸ The relationships of earnings and employment for persons with physical disabilities to the all persons of the same age and education in 2005-07 is applied to modern ACS results.

Work Disability

The CPS is the primary source of labor force characteristics for persons in the United States (U.S. Census Bureau 2019) and the source of the government's monthly unemployment rates that are widely quoted by the media. The CPS is used for a wide variety of purposes within the Federal government.

In March of every year since 1981, the CPS expands to collect more information on income and employment. The Annual Social and Economic Supplement (ASEC) to the CPS provides earnings and employment data through expanded questions that specifically address work disability. The U.S. Census Bureau began publishing data from the March Supplement in the 1980s (1983) (1989).

The ASEC uses a definition that is specific to persons with a work disability. The survey does not consider specific types of impairment or disability, but instead focuses on whether the individual has work-related limitations because of a physical or mental impairment that limits the individual in terms of performing work (U.S. Census Bureau 2019).

Skoog and Toppino (1999) opine that the CPS March supplement, or ASEC, was never intended as a tool to measure the existence or impact of disability. This is correct. The ASEC measures work disability, which is different from disability. Hale (2001) suggests that the work disability data are unusable because the definition does not match disability as defined by the Americans with Disabilities Act (ADA). However, the ASEC data do not rely on the ADA definition, nor is that definition the best one to use when assessing earning capacity loss.

The U.S. Census Bureau defines work disability as existing when a person meets one or more of the following conditions:

Figure 3 ASEC Work Disability Criteria

Not Severe	Identified by the March supplement question “Does anyone in this household have a health problem or disability which prevents them from working or which limits the kind or amount of work they can do?”
	Identified by the March supplement question “Is there anyone in this household who ever retired or left a job for health reasons?”
	Received VA disability income in previous year
Severe	Identified by the core questionnaire as currently not in the labor force because of a disability that is expected to last for at least six months
	Identified by the March supplement as a person who did not work at all in the previous year because of illness or disability
	Under 65 years old and covered by Medicare in previous year
	Under 65 years old and received Supplemental Security Income (SSI) in previous year

People who say yes to any of the Not Severe questions, but no to all of the Severe questions are classified as being not severely work disabled. Those who say yes to any of the Severe questions are classified as being severely work disabled.⁹

Experts who use the ASEC data specific to a work disabling condition must exercise clinical judgment in order to use the data effectively. In a forensic setting, a permanent physical or mental impairment that is medically or psychologically determined typically must be established in order to assign a reduction in worklife expectancy.

It is important to note that two of the criteria for a severe work disability, “not in the labor force because of a disability that is expected to last for at least six months,” and not working “at all in the previous year because of an illness or disability,” would not automatically result in assigning a worklife expectancy equal to that of a severe work disability to a specific individual.

The forensic expert must determine whether or not an individual retains the ability to perform some type of substantial, gainful work activity. If an individual is employed or clearly capable of employment based on the judgment of the expert, by definition that individual has a nonsevere work disability. This is true even if the individual has been unemployed for multiple years after the date of injury.

Meeting *Daubert* and *Frye* Criteria

Daubert (1993), as expanded by the subsequent *Kumho* (1999) decision, requires that all expert testimony meet the general tests of “relevancy” and “reliability.” Since use of disability statistics discussed in this rationale is for measurement of the impact of disability on lost future earnings, it is assumed that the relevancy criterion is met (Gibson 2001).

With regard to “reliability,” the Court held that scientific evidence must be “grounded in the methods and procedures of science.” *Daubert* provides four flexible factors to determine if the evidence qualifies: testing, peer review and publication, error rates and standards controlling the technique’s operation, and general acceptance in the relevant community. As updated by *Kumho*, the court stressed that not all factors may apply with every case, especially in the social sciences. The factors serve as flexible guidelines to assure the expert employs the same level of intellectual rigor as he or she would outside the courtroom when working in the relevant discipline.

Testing

The scientific testing criteria are principally directed at the “hard” sciences and engineering, and have less significance for vocational and economic testimony, which focuses on the future experience of people, which can never be tested or known with absolute certainty. However, data from the ACS and ASEC are produced and extensively tested by the U.S. Department of Commerce, Bureau of the Census. Sum and other researchers from the Center for Labor Market Studies at Northeastern University (2010) independently verified the worklife values contained

⁹ BLS instituted new questions on disability in the monthly CPS beginning in 2009. The added questions are identical to those used in the American Community Survey beginning in 2008, and are discussed in the previous section focusing on the ACS.

within the *Gamboa Gibson Worklife Tables* (Gamboa and Gibson 2010). The worklife expectancies contained within the tables were congruent with the data examined by the center.

McNeil (n.d., 2) states that the ASEC disability questions are based on survey work carried out by the Social Security Administration (SSA) in the 1960s. The SSA was developing a method to identify “individuals with a condition that prevented them from working or a condition that substantially increased the risk that they would become unable to work.” Further, McNeil comments that the work disability question from the ASEC has been asked since 1980, and that the ASEC is an important data source for analysts concerned with the disability worklife dynamic.

Peer Review and Publication

Use of the underlying ACS and ASEC data to measure the impact of disability on earnings and employment is the subject of multiple published and peer reviewed articles. The U.S. Census Bureau recently partnered with the Population Reference Bureau (PRB) and Sabre Systems to form a new American Community Survey Users Group. Its purpose is to improve the understanding of the value and utility of ACS Data and to promote information sharing among its users about key issues and applications. Presentations on VEI’s use of the ACS data have been part of the ACS Data Users Conference Programs in 2014 (Gibson 2014), 2015 (Gibson 2015), and 2017 (Gibson 2017) with the 2015 paper and presentation focusing specifically on use of disability data to quantify lifetime loss of earning capacity. Joy (2017) reviews the disability criteria used in the ACS and monthly CPS, and concludes they are appropriate for use within a forensic setting. A bibliography including over 100 publications using the ACS and/or ASEC data is available.

Both government and non-government researchers rely on the ASEC employment rates and earnings figures for nonforensic purposes. Senator Tom Harkin, chairman of the Committee on Health, Education, Labor & Pensions (HELP), introduced bipartisan legislation designed to help young people with disabilities transition successfully from school to higher education. His research and data came directly from the ACS disability data (2012). Burkhauser, Daly, and Houtenville (2001) used data from the ASEC to compare the employment experience of people with and without work disability during the 1990s business cycle. This paper was published through the Disability Statistics Rehabilitation Research and Training Center (RRTC) for Economic Research on Employment Policy for Persons with Disabilities at Cornell University and Hunter College. The RRTC has published also several other papers using ASEC data on persons with a work disability. These include a paper by Houtenville (2000) that studied the prevalence, employment rates, and household income of people with a work disability, as well as a paper by Burkhauser, Houtenville, and Wittenburg (2003) that compared the employment trends of persons with work limitations using the ASEC and two other government surveys.

The RRTC publishes an annual disability compendium of disability data from the ACS (Houtenville 2019). It also maintains a statistics “compendium” online, bringing together disability statistics compiled by various federal agencies. Among the information cited are the ACS and the monthly CPS.

BLS adopted the impairment-based definitions in the ACS to use in the monthly Current Population Survey for purposes of tracking the employment outcomes of persons with disabilities (U.S. Bureau of Labor Statistics 2010). BLS uses these data to publish regular comparisons of the

employment rates for persons with and without disabilities (Table A-6 2020). The U. S. Department of Labor’s Office of Disability Employment Policy also uses the data from the CPS as well as the much larger ACS to track and project the employment impact of disability (Disability Employment Statistics 2019).

Gamboa, et al. (2006), Gamboa (2008), and Crouse and Gamboa (2014) use data from the ACS to discuss the effects of mild traumatic brain injury on both earnings and employment. Gamboa (2006) used the same data to define key issues in assessing economic damages in cases of acquired brain injury. Gamboa and Gibson use both the ACS and ASEC for production of disability-specific worklife expectancy tables (2010) (Revised 2015).

Disabled veterans and individuals receiving Social Security Disability payments are among an expanding component of the current labor market. Researchers such as Tennant (2012) and Meyer and Mok (2013) use ACS data to measure the economic consequences of their disabilities. Another expanding component of the labor market includes Baby Boomers who are entering the ranks of older age. ACS data were recently used to examine the combination of disability and older Americans. Researchers used five year estimates (2008-2012) to examine demographic and socioeconomic characteristics of the older population with disabilities in order to help anticipate future disability prevalence in the older population (He and Larsen 2014).

Error Rate

The error rate is primarily intended to apply to the “hard” sciences and engineering in conjunction with the testing performed in those disciplines (e.g., reliability of a bolt securing a heavy sheet of metal). One can, however, compute the standard error of a worklife expectancy using the formula for the standard error of acceptance. The large sample sizes of the ACS and ASEC surveys assure low standard error rates. Sample size and its relationship to reliability are discussed further in the “Reliability” section below.

General Acceptance in the Relevant Community

The *Daubert* test (as well as the *Frye* decision (1923) still used in many states) requires experts to apply generally accepted methodology. The general acceptance of combining vocational and economic disciplines for a thorough analysis of the impact of disability on employment and earnings was demonstrated by an article in *Forbes*. This article identifies the relationship between physical and/or cognitive injuries and negative impact on financial wherewithal as it relates to the NFL’s settlement with impacted players and families (Rishe 2013).

Proof that the ACS and ASEC data meet the General Acceptance burden is offered through the multiple peer reviewed and other publications cited throughout this document. The “relevant community” is the community of rehabilitation researchers who rely on both ACS and ASEC data to determine both earning levels and employment levels for persons with a disability or a work disability. By way of example, Bjelland, Burkhauser, and Houtenville (2008) have regularly used information from the ACS and ASEC in assessing the impact of disability on employment. In addition, as previously mentioned, the Disability Statistics RRTC brings together disability statistics from a variety of federal agencies, including the ACS and the monthly CPS.

Researchers from the Institute for Homeland Security Solutions (IHSS) (Boos, et al. September 2009) used the data from the ACS to measure social vulnerability. The researchers recognize the usefulness of the ACS data in their application, as well as other applications including disability, health, ethnicity, age, and poverty. Their research brief specifically cites a previous article in *Neurorehabilitation* (Gamboa, Holland, et al. 2006), as well as other peer reviewed articles mentioned within this VER.

Perhaps the most thorough exploration of the impact of disability on employment, *Counting Working-Age People with Disabilities* (Houtenville, Stapleton, et al. 2009), uses data from both of these surveys, as well as the NHIS, SIPP, Canadian surveys, and others through a collection of articles authored by fifteen different disability researchers. Specifically, for purposes of computing worklife expectancy, Richards and Donaldson (2010, 99) note in using the ACS and ASEC data that “it is demonstrably a fact that disabled persons as a whole have lower labor force participation rates than those not disabled. By definition, worklife expectancies of those unable to participate in the labor force are reduced, either in full or in part.”

Validity

One issue is the question of the validity of ACS and ASEC data in estimating earnings and employment levels. Validity refers to whether or not the data collected measure what they are designed to measure, i.e., earnings and levels of employment. If we were talking about a test, then the question would be, “Does the instrument test what it is intended to test?” If we are talking about sampling, then the question would be, “Does the sample accurately reflect the population in question?”

There are different types of validity, but the over-arching type is construct validity. In a VEA, the constructs in question are the earnings and employment levels of the populations of persons without and with a disability. The question is, “Do the samples of data we have at hand (ACS and ASEC) accurately measure the earnings and employment levels of persons without and with a disability?”

In order to assess the accuracy of the data, we look at other types of validity: face validity and content validity. Face validity refers to the extent to which the sample looks like the population in question. Content validity in this context refers to the questions asked of the participants in the sample, namely their earnings and employment history.

The ACS and ASEC have both face validity and content validity in that the samples are taken from populations of individuals who are defined as nondisabled or disabled and these individuals are questioned about their employment and earnings. There is also convergent validity, in that the two data sets that purport to be assessing/measuring the same construct are in agreement to an acceptable degree.

Both the ACS and ASEC samples are in agreement in very important dimensions. Both sets of data show that earnings and employment levels for the nondisabled and disabled population are in the direction that is expected. Those with disability show lower earnings and lower levels of employment than nondisabled individuals. It can also be concluded that the ACS and ASEC data

(Joy 2017) measured the reliability of the six disability questions based on longitudinal data over a sixteen-month period, finding stability in the disability measures across time, with both the physical and mobility questions being the most stable. A qualified expert must understand the nature of the data and exercise clinical judgment specific to the individual being evaluated. It is the combination of understanding the data and clinical judgment that can best aid the trier of fact.

It is generally accepted that rational decision-making requires the use of both probability statistics and professional judgment (Rubin 2003). While the U.S. Census data that emanate from both the ACS and ASEC provide an excellent data source for defining both earnings and employment levels for persons without and with various types of disability, applying the data to a specific individual requires a thorough understanding of the data in combination with an understanding of the unique traits and characteristics of the individual with a disability. Professional judgment by the forensic expert is necessary to determine from which population to draw the statistics to measure the expected earnings and employment rates of a given plaintiff.

The Effect of Disability

Two facts exist for persons with a disability. The first is that on average, when such persons work year-round, full-time, they earn less than counterparts without a disability. Second, they experience lower levels of labor market participation and employment, which when considered in the aggregate, produce lower levels of worklife expectancy than those without a disability. These two facts combine to produce a probable reduction of lifetime expected earnings for persons with a disability.

These facts are supported by data from the ACS, the ASEC, and the SIPP that are available on the Census website (U.S. Census Bureau 2019), as well as the monthly CPS cited earlier. The findings using these and other data sources are confirmed in research conducted by numerous nonforensic researchers. For instance, McNeil (2000) used data from the March 2000 ASEC to explore employment rates of persons with a work disability. Also using ASEC data, Yelin (1996), Gibson (2001), and Gibson and Tierney (2000) have shown that employed persons with a work disability, both not severe and severe, are more likely to become unemployed than persons without a work disability. If unemployed, they are less likely to find employment. These differences become more profound with age, making it more difficult to compete with their counterparts without disability and further reducing worklife expectancy.

In work funded by the U.S. Department of Health and Human Services, National Institute on Disability, Independent Living, and Rehabilitation Research, researchers at Cornell University and Hunter College published multiple papers that explore the reduction in earnings and employment for persons with a disability. Burkhauser, Daly, and Houtenville (2001) and Houtenville (2000) used data from the ASEC. Houtenville (2006), Weathers (2005), and Erickson and Lee (2008) used data from the ACS. Cornell's Employment and Disability Institute maintains online disability statistics using the most current versions of the ACS and ASEC (Disability Statistics 2017). The Rehabilitation Research and Training Center on Disability Statistics and Demographics maintains further data using both these surveys (Houtenville 2019).

Public health researchers have used data from the ACS to study the relationship of ethnic origin and poverty to disability (Fuller-Thomson and Minkler 2005) (Minkler, Fuller-Thomson and

have concurrent validity, in that the data have the ability to distinguish between two groups that should theoretically be different, i.e. nondisabled vs. disabled.

One should note that validity is always a matter of degree and not a black or white issue. Validating a construct/theoretical relationship is always a matter of degree. For example, even before the ACS data were published, judgments and decisions were made based on ASEC data. The ACS data could be considered a further refinement and validation of the theoretical relationship between earnings, employment, and disability.

Reliability

Another issue is the question of the reliability of ACS and ASEC data in estimating earnings and employment levels. Reliability refers to the consistency or the repeatability of a measurement operation. For example, if we were measuring the intelligence of an individual, we would want to obtain the same IQ score or nearly the same IQ score each time the individual was evaluated using the same test of intelligence. Likewise, if we take repeated samples of a defined population of people, we would hope to obtain similar scores for each sample. It is important to note that high reliability does not necessarily mean high validity. There can be high reliability, but no validity. For example, we might obtain highly reliable and consistent measures of swimming speed, but these data would not be valid with regard to the mathematic ability of the swimmers. Reliability is necessary, but it is not a sufficient condition for validity. Reliability refers to the precision of measurement of a sample; validity refers to the accuracy of the sample in representing the characteristics of the population.

In assessing reliability, the size of the sample is of critical importance. The larger the sample size is, the more inclusive and representative the sample becomes of the general population. Therefore, opinions and conclusions based on the data can be drawn with a higher degree of confidence that the results would match a census of the general population. Both the ACS and ASEC use very large samples. The sample size of the ASEC is more than 100,000 individuals annually. The ACS sample size is in excess of three million. Therefore, it would be expected (and is true) that the potential error would be extremely small for both sets of data, and the overall data sets would be expected to be highly reliable.

Issues in Validity and Reliability

It must be stressed that by its very nature statistical data always have limitations. Many times, the limitations of statistical data can be improved by collecting still more data. For example, the methods by which individuals are classified as being disabled or nondisabled and degree or type of disability could be investigated from the standpoint of inter-rater reliability, which measures the consistency of the individuals doing the judging or categorizing of persons with a disability. Likewise, a longitudinal study following a group of individuals over a lifetime of work could provide a goldmine of useful data. However, the factors limiting such data-collection projects are always time and costs. It would take upwards of 40 years to complete the longitudinal study contemplated in this paragraph.

In the meantime, the ACS and ASEC data sets are the largest and best available for measuring earnings and employment levels for persons without and with a disability. Recent research by Joy

Guralnik 2006) (Fuller-Thomson and Gadalla 2008). Using ACS data, researchers from the Kessler Foundation identified individuals with disabilities that have achieved success in the workplace. Their efforts at identifying the disability employment gap can inform efforts to develop policies and practices that will narrow the persistent gap in employment between people with and without disabilities (Sevak, et al. 2015). The pay gap existing for persons with disabilities is also demonstrated by the American Institutes for Research, using ACS to demonstrate not only the pay gap, but also the increase in gross domestic product (GDP) that would be achieved if people with disabilities were paid comparably as those without (Yin, Shaewitz and Megra December 2014).

Other research includes a study by McCollister and Pflaum (n.d.) that uses the NHIS to study the effects of back pain on worklife expectancy and earnings, and another by DeLeire (2000) that uses the SIPP to address the continuing negative effects of disability following the passage of the Americans with Disabilities Act. Preceding the DeLeire article, a paper presented at the American Law and Economics annual meeting in 1996 cited the probable negative effect of the ADA on employment for persons with a work disability (Gamboa, Gibson and Tierney 1996). In fact, all known research on the subject shows that disability negatively impacts earnings and employment rates.

Defining Earning Capacity

In order to perform a VEA, it is necessary to first understand the concept of earning capacity. Surprisingly little has been written in the forensic vocational or forensic economic literature on the topic of earning capacity. Horner and Slesnick (1999) discuss the concept and the need for a dialogue on the topic. In assessing earning capacity, they discuss the concepts of actual earnings, expected earnings, and earning capacity. These three concepts provide a framework for determining a loss of earning capacity in personal injury litigation. In response to their article, Tierney and Missun (2001, 3) define earning capacity from the perspective of a process model. They indicate, “It differs from traditional models by forsaking the essentialist categories of actual earnings, expected earnings, and earning capacity as commonly defined . . . It focuses on the process applied in assessing lost (future) earnings from which the earning capacity of a particular individual can emerge.” Field (2008) provides a historical analysis of future earnings from the perspective of a five-fold venue, one of which is earning capacity.

Earning capacity is a term used by the courts to identify one component of monetary damages associated with a permanent impairment resulting in disability. Earning capacity differs from wage loss. Wage loss is retrospective, while earning capacity is prospective. Wage loss occurs when an employed individual is unable to continue employment in his or her occupation. It is typically a temporary condition.

An employed individual who sustains a back injury resulting in surgery will experience a period of recuperation during which time actual wages may not be realized. Upon returning to work, a future loss of earning capacity may or may not be probable. If the back injury is a result of a tort or wrong, the tortfeasor is responsible for compensating the individual for past wage loss. If a permanent impairment exists that limits the individual in terms of his or her ability to work, a future loss of earning capacity is probable.

Estimating earning capacity over a lifespan requires an analysis that is both vocational and economic in nature. The VEA is a five-step process. It requires a definition of each of the following: pre-injury earning capacity, pre-injury worklife expectancy, post-injury earning capacity, post-injury worklife expectancy, and a present value calculation.

The first decision point in a VEA requires the expert to define the base dollar figures that reasonably represent pre- and post-injury annual earning capacities. If the individual being assessed has a permanent, medically determinable cognitive or physical impairment, the expert considers the functional limitations associated with that impairment. If it is further determined that the person meets the definition of disability, other factors specific to the individual are then considered. These may include age, education, work history, earning history, general learning ability, transferable skills, present employment status, and labor market access.

Earning capacity represents an individual's ability or power to earn money. It is the sum total of what one brings to the marketplace intellectually and physically. Education, skills, general learning ability, and the like comprise intellectual capacity. Ability to perform the physical activities associated with various jobs constitutes physical aptitude. These physical and intellectual attributes comprise human capital, and it is this human capital that enables a person to produce cash flows over a worklife.

Thus, if a person sustains a closed head injury that limits the ability to focus on a task, remember details, or relate to others, that person may sustain an impairment of mental ability. If, on the other hand, the person sustains a permanent injury limiting the ability to lift, climb, balance, stand, sit, etc., then physical ability is reduced. What remains to be determined in a case of permanent impairment is whether or not the injury in question has reduced or destroyed earning capacity. If so, that individual's earning capacity absent disability requires assessment and comparison with the earning capacity with disability.

Human Capital

The legal system uses a variety of terms to identify probable future economic loss associated with a reduction in ability to work and earn money. Terms such as "reduced power to labor and earn money," "reduced ability to earn," "diminution of capacity to work and earn money," "destruction or reduction of power to work and earn money," and "reduced earning potential" are used to describe compensable damages associated with permanent impairment resulting in disability.

The courts generally acknowledge that something other than wage loss must be compensated for if the individual is likely to have a future earning reduction. If the courts ignored potential to earn and focused on wage loss alone, infants, children, or young adults with a nonexistent or limited earning history would be unable to recover monies likely to be lost as a result of a work disabling condition.

The language used by the court is synonymous with what economists call human capital. Capital is anything that produces wealth. It can be \$100,000 invested in a certificate of deposit earning five percent per year or the same amount of money invested in ten, \$10,000 lawn mowers. Each represents a form of capital, with the mowers requiring workers before a return on the investment is realized after expenses associated with labor and equipment are considered.

Human capital is defined by economists as the acquisition of knowledge, skill, and understanding as a result of education, training, and experience that allows an individual to sell his or her services in the marketplace in exchange for wages and fringe benefits (Press 2020). The predictors of human capital are two-fold: intelligence and physical ability. These precursors were first introduced and defined by Gamboa in Thomson West (2006) and serve as the most fundamental building blocks of human capital. Each of the twelve-thousand plus occupational titles contained in the *Dictionary of Occupational Titles* (DOT) are identified as having one of five different levels of general learning ability or intelligence in order for the specific occupation to be performed satisfactorily by a worker (National Academy of Sciences, Committee on Occupational Classification and Analysis 1981). While these definitions are subjective estimates made by employees of the U.S. Department of Labor, they serve as a superb estimate of probable level of intellectual capacity needed for the thousands of occupations identified in the DOT.

There is a strong positive correlation between the variables intelligence, education, skill level, and earnings. Herrnstein and Murray (1994) do an excellent job of examining the relationship among these variables and earnings. Similarly, Gladwell (2008, 79) notes that the higher the IQ score, “the more education you’ll get, the more money you’re likely to make, and – believe it or not – the longer you’ll live.” Gamboa and Gibson (2006) note that these same variables increase both earnings and worklife expectancy, and (Gibson 2015) quantifies lifetime earnings by education, age, gender, and disability status. The length of employment over the life expectancy adds significantly to lifetime earnings. Gibson and Gibson (2017) demonstrate the interaction of age (experience), education, gender, and disability status for projecting future earnings progression.

Intelligence and physical ability, the precursors to human capital, are used to define earning capacity loss in cases involving infants or children too young to be tested. Absent testing, parental level of educational attainment can be used as an estimate of the infant or child’s capacity to complete formal education. There is a positive correlation between intelligence and level of educational attainment. Another approach involves IQ testing by a psychologist familiar with the statistical techniques used to account for regression toward the mean. By IQ testing of each biological parent, a specific IQ score can be used for an infant or child. However, either the education approach or the IQ testing approach is acceptable as an estimate of infant or child level of general learning ability.

Occupations require varying degrees of physical capability. Some occupations require physically strenuous activity while others require little to no physical exertion. The U.S. Department of Labor identifies a myriad of physical demands associated with the occupational titles contained in the DOT. Generally speaking, the occupations range from sedentary to very heavy and include a variety of exertional activities such as climbing, bending, reaching, prolonged standing, etc.

The development of human capital relies upon the two fundamental building blocks, intelligence and physical ability. Reduction or diminution of either of these two components of human capital is synonymous with a decrease in investment capital. A decrease in capital decreases the return on investment (ROI) whether it be human capital or investment capital. If the \$100,000 CD is reduced to \$20,000, the ROI at five percent is reduced to \$1,000. If an individual, as a result of brain injury, sustains a diminution of cognitive functioning resulting in a decrease from significantly above average to average, a significant decrease in the human capital and ROI is realized. Similarly, data from the ACS reveal that college educated workers with physical limitations resulting in problems

associated with lifting, carrying, climbing, etc. realize a significant reduction in earnings when compared to nondisabled counterparts who are without disability (U.S. Census Bureau 2019). Focusing on workplace discrimination, data from the ACS was used to demonstrate that persons with disabilities benefit less in terms of earnings gains with increased education (Baldrige, et al. 2019). Information from the National Longitudinal Transition Study-2 (NLTS-2) also confirms this impact for high school graduates (Newman, et al. 2011).

Assessing Earning Capacity

In litigation, the issue is whether or not a permanent injury will affect an individual's ability to work and earn money over a lifetime. Earning capacity is the usual standard for defining lost earnings. Earning capacity is sometimes defined as the "high end" of what a person can earn, in terms of both the annual salary and the number of years worked over a lifetime. The courts, however, usually do not accept damage arguments that would push the concept of earning capacity beyond the bounds of common sense. Our approach in assessing earning capacity is to look at the individual's reasonably expected earnings.

The process of analyzing a case involves answering a series of questions, with each question having several options. Through the process of answering these questions, an individual's earning capacity will emerge. In assessing an individual's annual earning capacity, the choices are to use either actual earnings or a proxy. In most instances, a mature worker has actual earnings that are congruent with future lifetime earning capacity. In cases where historical earnings are used to measure future earning capacity, an individual's historical earnings must be restated to present day dollars for proper comparison. Important sources of information are available from the U.S. Bureau of Labor Statistics:

- Consumer Price Index, All Urban Consumers (CPI-U) (2019)
- Major Sector Productivity and Costs Index: Business Sector, Hourly Compensation (2019)
- National Employment, Hours, and Earnings: Average Hourly Earnings of Production Workers (2019)

However, younger workers rarely have earnings that reasonably represent an average lifetime earning capacity. Vocational theorists note that individuals typically go through a series of stages before settling into a career. Young children and adolescents experience a fantasy stage (the young child desires to be a policeman, trapeze artist, etc.). In late adolescence and early adulthood, an individual experiences a period of exploration at which time a variety of career options are explored, assessed, and evaluated (college students changing majors exemplify the exploration process). As the worker matures, he or she tends to become established in a career. One then proceeds through a period of maintenance and, finally, decline (Ginzberg, et al. 1951) (Super 1957).

This vocational process of career development is conceptually related to the economic concept of the Age-Earnings Cycle. There is obviously a high correlation between age and earnings in that earnings tend to increase as the worker ages because experience enhances productivity, and more productive workers earn a premium in the labor market. It should be noted that the ability to be productive is based on the acquisitions of skill, the intellectual and physical aptitudes that one brings to the marketplace, and, of course, the level of educational attainment achieved by the

worker. Gibson and Gibson (2017) use ACS to present age-specific earnings by gender, level of education, and disability status. The results further demonstrated that age-related increases by persons with disability are lower than those for persons without limitations. This is consistent with the previously discussed research by Baldrige (Baldrige, et al. 2019).

Proxy earnings may be specific to the worker's education level, occupation, or to the labor market, as well as to the worker's gender, disability, and/or age. Proxy earnings can be found in the Occupational Employment Statistics from the U.S. Bureau of Labor Statistics (2019). Data from the ACS (U.S. Census Bureau 2018) and ASEC (1998 forward) surveys can also be used to calculate average earnings of individuals by gender, level of educational attainment, and by disability status.

Beginning with the 2005 ACS, national average earnings can be calculated by occupational grouping, and state and local averages can be calculated by gender, education level, and disability status. Further refined by the ACS, occupation earnings can be delineated by education. Gibson refined and updated the inaugural presentation given at the ACS Data Users Conference (2014) to demonstrate additional measures of earning capacity for individuals. The data demonstrate that expected earnings tend to increase with education even within specific occupations (Gibson 2018).

Earning capacity is more commonly reduced, rather than destroyed, as a function of a disability. The post-injury earning capacity of a person with a disability is frequently represented by a proxy. The earning capacity associated with the proxy is often greater than the actual earnings of the individual with a disability. Many persons who are recently disabled have not yet begun employment or, if working, are earning at levels less than the amount that would reasonably represent their average lifetime earning capacity, stated in terms of present value.

Older workers with limited education who have performed heavy physical labor and who are disabled are more likely than younger workers to experience a complete destruction of earning capacity as a result of disability. A younger worker with a similar occupational history and a comparable disability would be relatively more likely to experience a reduction of lifetime earning capacity. Total destruction of earning capacity typically occurs among older workers who are no longer capable of performing their usual and customary work or those who are severely or catastrophically impaired, regardless of age.

Once the expert establishes annual earning capacity, appropriate fringe benefit and worklife expectancy values are applied to project lifetime earnings. Either actual fringe benefits or a statistical average is used. Statistical averages for fringe benefits may often be derived from the U.S. Bureau of Labor Statistics' *Employer Costs for Employee Compensation* (2019). Another source for health care coverage emanates from the Kaiser Family Foundation's health insurance survey (2019).

Worklife Expectancy

The second decision point in a VEA requires the expert to define pre- and post-injury worklife expectancies, or the number of years of future employment. Worklife can be thought of on an *assumed* or a *statistical* basis. Lay persons typically think of worklife as an assumed statistic, where they project the number of years to an expected retirement age (e.g., Social Security

retirement at 67). However, through use of statistics, economists typically adjust for the probability that a person will not work at earlier ages (e.g., lay-offs, early retirement) or will work past typical retirement ages.

Defining Worklife Expectancy

Through typical economic measurement, worklife expectancy is a statistical average, derived by summing a series of joint probabilities of life, participation, and employment (LPE) from a given age through age 89. The notion of worklife expectancy is not unique to the forensic setting, as evidenced by the various articles by Millimet et al., referencing ASEC data (Millimet, Nieswiadomy and Slottje 2010) (Millimet, Nieswiadomy and Ryu, et al. 2003). The worklife methodology used in VEAs was introduced as the LPE method by Brookshire and Cobb (1983) and refined by Brookshire, Cobb, and Gamboa (1987) to include persons with a work disability. With this methodology, a person's earning capacity is reduced by the probability of being alive and employed.

This methodology can be applied using data from various surveys in order to calculate disability-related worklife expectancy. Using ASEC data, worklife expectancy tables for persons with a work disability were first published by Gamboa (1987) and updated periodically. The latest edition includes worklife expectancy statistics for persons with a work disability as well as for those with a physical or cognitive disability (Gamboa and Gibson Revised 2015).

The notion of discounting an individual's future earning capacity by the probability of being alive and employed first appeared in an appellate court decision entitled *O'Shea v. Riverway Towing* (1982, 1194) written by Richard A. Posner. In commenting on the plaintiff's before injury expected earnings, he notes:

If the probability of her being employed as a boat's cook full time in 1990 was only 75 percent, for example, then her estimated wages in that year should have been multiplied by .75 to determine the value of the expectation that she lost as a result of the accident; and so with each of the other future years.

In terms of assessing after injury expected earnings, he describes the following:

Here is a middle-aged woman, very overweight, badly scarred on one arm and one leg, unsteady on her feet, in constant and serious pain from the accident, with no education beyond high school and no work skills other than cooking, a job that happens to require standing for long periods which she is incapable of doing. It seems unlikely that someone in this condition could find gainful work at the minimum wage. True, the probability is not zero; and a better procedure, therefore, might have been to subtract from Mrs. O'Shea's lost future wages as a boat's cook the wages in some other job, discounted (i.e., multiplied) by the probability-very low-that she would in fact be able to get another job. But the district judge cannot be criticized for having failed to use a procedure not suggested by either party. The question put to him was the dichotomous one, would she or would she not get another job if she made reasonable efforts to do so? This required him to decide whether there was a more than 50 percent probability

that she would. We cannot say that the negative answer he gave to that question was clearly erroneous.

The opinion reflects a “better procedure” for estimating future expected earnings – that of utilizing probability statistics to better define future expected earnings in assisting the trier of fact. The O’Shea case involves a woman with a severe work disability. The probability of employment for a 57-year-old female high school graduate with a severe work or physical disability is .044 or .116, respectively, compared to a probability of employment of .654 or .673 for a female of the same age and education with no disability (Gamboa and Gibson Revised 2015).

Assessing Worklife Expectancy

Because worklife expectancy is a statistical average, exercising professional judgment is essential when defining probable worklife expectancy in years. Worklife expectancy is specific to gender, career pattern, education, age, and disability.

When assessing worklife expectancy, it is important to consider the individual’s work history. Typically, males have worklife expectancies that are greater than females. However, a specific female may demonstrate a work pattern that is more like that of an average male of the same age and level of education than that of a female. Corcione and Thornton (1991) demonstrated similar worklife expectancies for males and career-driven females. Richards and Donaldson (2010, 69) note that forensic economists frequently adjust for the worklife of a career-driven female by using male worklife expectancies. A recent article in the *Journal of Economic Perspectives* highlights increased labor force participation rates for women using data from the ASEC as well as the SIPP (Goldin and Mitchell 2017). Similarly, some males may exhibit a pattern of work that is unlike that of an average male with a similar age, education level, and disability status. The specifics of each individual must be considered when assigning worklife expectancy.

Defining worklife expectancy for an individual also requires examination of personal and economic incentives of work. Individuals who are members of labor unions, for example, may have economic incentives in the form of pension receipts to maintain work until a specific age. Older workers with younger children may have economic incentive to maintain employment and support further educational attainment. Individuals with demonstrated employment higher than their statistical cohort may be expected to continue. Using rates of continuous employment may be appropriate in all or any of the above examples.

The population with disabilities varies significantly in terms of severity of disability, which in turn influences access to various occupations in the labor market. This variance is taken into account with worklife expectancy averages for persons with disabilities. When using data specific to people with work disabilities, for instance, these averages are of three types: the average for all persons with work disabilities, the average for persons with severe work disabilities, and the average for persons whose work disabilities are not severe. Individuals who meet the definition of work disability and who are employed or who have access to a significant portion of jobs in the labor market may be considered not severely disabled. Individuals who are highly unlikely to find or maintain employment are likely to be totally disabled or to meet the definition of severe work disability.

With data from the American Community Survey, averages can be looked at by type of disability, such as physical or cognitive, which would be appropriate for those persons meeting the definitions noted previously. Through isolation or combination of these varying disability types, an analysis can be customized to meet the specifics of a particular case.

Employment statistics offer average for groups of individuals. Just as a nondisabled worker may have employment experiences that exceed the average for their statistical cohort, a person meeting the definition of disability may have employment experiences that exceed the average. An expert may choose to identify the individual as having a higher (or lower) than average level of expected employment probabilities through the use of a continuum placement.

Similarly, an expert may determine that for a particular plaintiff, an assumed worklife is superior to use of statistical averages. For example, assume the plaintiff has 25 years of continuous employment in a given position, and full retirement is available through his pension in another five years. Under this scenario, the plaintiff has continually defied statistics for the last 25 years, and the expert may reasonably use his full retirement age to project the number of years worked had the intervening incident not occurred.

The ACS defines disability from both a physical and cognitive perspective. In addition, it identifies persons with problems associated with self-care and/or going outside of the home alone. When either of these two additional limitations exist, a severe physical or cognitive disability is likely to exist.

Present Value of Future Lost Earnings

The last decision point in a VEA is the statement of future loss of earnings in terms of present value. Present value in a litigation context specific to loss of earning capacity refers to the amount of money needed today which, when prudently invested, will replace a future stream of lost earnings. The present value sum plus accumulated interest should provide periodic cash payments to replace the expected lost earnings over the plaintiff's worklife expectancy, with no shortfall or overage.

The calculation of present value considers two facts. The first fact is earnings tend to increase over time. For example, the average teacher in 2016 is likely to earn less than the average teacher in 2026. As a result, present value of future lost earnings must consider the fact that earnings are likely to increase over the time period that losses are projected. The annual rate of increase is often referred to as the growth rate.

The second fact concerns a financial consideration. If an amount of money is invested today for future lost earnings, interest can be earned from investing this money before the loss occurs. For instance, money in-hand today to compensate for loss of earnings as a teacher in 2026 should also consider interest that can be earned from investing this money until 2026. The interest rate used to reduce loss of future value earnings to present value is often referred to as the discount rate.

Growth and discount rates can either be stated as "nominal" or "real" rates. Nominal rates include inflation while real rates are net of inflation. For example, suppose in a particular year the general rate of inflation as measured by the Consumer Price Index (CPI) is 3%, and an investment yields

a 5% rate of interest. The nominal rate of interest is 5%. However, there would only be a 2% gain in terms of the real purchasing power of the money earned because inflation has also risen at 3%. The real rate of interest in this example would be 2%. Likewise, a person with a 5% increase in earnings in a year when the general rate of inflation was 3% would have a 5% nominal and 2% real growth in earnings. Present value calculations can either be performed with real or nominal rates. Both approaches are acceptable for computing the present value of a future stream of lost earnings.

Growth Rate for Compensation

Before selecting a growth rate, one must consider precisely what is being grown. There are a number of fairly common misunderstandings in this regard that deserve mention. For example, some attorneys refer to the growth rate as “inflation.” The word inflation in the field of economics typically refers to an increase in consumer prices, as measured by the CPI. The rate of increase in the CPI may not be the same as the rate of growth in earnings since consumer prices and a worker’s earnings are different variables.

Another common misunderstanding is the belief that the growth rate is the rate of increase in wages. Since a “lost earnings” analysis considers both base wage and fringe benefits, the growth rate should consider both components. Fringe benefits such as health coverage and retirement have an economic value, which is part of what a person earns in exchange for their employment. A person may have an economic incentive to accept a lower paying job because it offers better benefits. In other instances, a person may have an economic incentive to accept a job with no benefits, other than those that are legally mandated, if they are compensated with relatively high wages. For these reasons, total compensation (wages plus benefits) is generally the appropriate variable to examine when discussing what is often referred to as growth in earnings.

Figure 4 shows historical rates of growth for inflation, wages, and total compensation, all from the U.S. Bureau of Labor Statistics. The data summarized in Figure 4 show that the rate of growth in total compensation has consistently outpaced both inflation and wage growth for short-term as well as long-term time periods. Thus, any analysis of lost earnings conducted during those periods that used a growth rate measured by wages only, would have underestimated the actual growth.

Having decided to examine compensation data, instead of inflation or wage data, the next step towards choosing a growth rate is a selection of historical time period(s) that should be considered for the assessment. Averages for different time periods will obviously result in different average nominal and real rates of growth for compensation.

Future projections are made with uncertainty to the future state of the economy. For example, no one could say with great certainty whether or not inflation will be relatively high or low ten years from now, whether or not our economy will be in a recession at that time, etc. For these reasons, a reasonable and fair estimate of the future rate of growth in total compensation should generally be based on long-term data for average growth in total compensation. Long-term averages cover many years, including years of recession and strong economic growth as well as years with high and low levels of inflation. The same time periods examined for compensation growth should be reviewed for interest rates used to discount an award to present value, as discussed in the following

section. Therefore, the selection of historical time period(s) to consider for future compensation growth must also be appropriate for choosing a fair and reasonable discount rate.

Interest or Discount Rate

The next step in computing present value is to reduce the future cash flow values for interest the plaintiff can earn by investing a lump-sum award. That is, we must reduce the future value of projected cash flows for the interest the plaintiff can earn since the damages award is in advance of the anticipated occurrence. Choice of the rate used to measure interest is critical since the higher the assumed interest rate, the larger the reduction and the lower the needed lump-sum award.

Finance theory refers to this process as *discounting* and the rate applied as the *discount rate*. Further, such theory recognizes that discount rates are comprised of expected inflation, a real rate of return, and a risk premium. Whether valuing business income, a potential investment, or future wages, theory requires that the rate used reflect the overall riskiness of the measured cash flow. Valuation of lost future compensation is not measurement of a speculative investment, but the replacement of the bread and butter the plaintiff is putting on the family table. As such, the risk premium component should be valued at zero.

This is similar to the approach proposed by Brody over thirty years ago (Brody 1982). Further, this approach is consistent with that prescribed by the U.S. Supreme Court (Jones and Laughlin Steel Corporation v. Howard E. Pfeifer 1983), in which they dictate use of the “best and safest investments” and a “risk-free stream of earnings.”

With the intent of applying a risk-free discount rate, we must determine the best instrument to measure this rate. Risk of debtor default brings increases in interest rates to compensate the creditor for the risk assumed. Thus, the instrument used should bear no such risk. Experts agree that the closest instruments to being free of such risk are the bonds and bills issued by the United States Treasury. However, our search for a risk-free rate does not stop with identification of the issuer of the instrument. The Treasury offers many forms and durations of debt instruments. Consider two extremes presented in Figure 4 debt instruments with 91-day and 10-year maturities. As shown, longer-term commitments regularly command higher interest rates, despite the fact that both bear the same risk of default, considered to be zero. Investors command a premium to compensate for the long-term commitment and the inherent risks associated with it, including the risk of inflation.

Figure 4 Key Growth and Interest Rates¹⁰

Period	Inflation	Wage Growth	Compen. Growth	91-Day	10-Year ¹¹
60 years (1959-2019)	3.7%	4.1%	4.9%	4.6%	N/A
50 years (1969-2019)	4.0%	4.1%	4.9%	4.7%	6.3%
40 years (1979-2019)	3.2%	3.3%	4.0%	4.3%	6.0%
30 years (1989-2019)	2.4%	3.0%	3.4%	2.8%	4.5%
20 years (1999-2019)	2.2%	3.1%	3.2%	1.7%	3.4%
10 years (2009-2019)	1.8%	2.4%	2.5%	0.6%	2.4%
5 years (2014-2019)	1.5%	2.9%	2.9%	1.1%	2.3%

The risk of inflation arises because interest rates and note values change with inflation. As shown in Figure 4, interest rates rise and fall with inflation. If an investor buys a 10-year note in a period of low inflation, a rise in inflation will decrease the value of the investment and the real rate of return. As noted by Pelaez (1995, 54), discounting lost earnings by a long-term rate is asking the plaintiff “to accept risk in order to reduce the tortfeasor’s liability.”

In addition, multi-year Treasury instruments can carry a tax disadvantage for the buyer. Some Treasury instruments pay no interest until maturity. However, an imputed annual interest amount¹² is required to be realized as taxable income, resulting in annual tax payments before receipt of any cash flow from the investment. Standard long-term Treasury notes do pay interest every six months. However, even these may have a hidden tax disadvantage, since adjustment of a bond’s face rate to the rate commanded by financial markets is achieved by paying more or less than the face value of the bond or through an “Original Issue Discount.” This difference is also amortized over the life of the bond and realized as an adjustment to interest earned. Thus, in cases where the market rate exceeds the face rate, the buyer will pay less than the face value of the bond and pay taxes on the annual amortization even though the actual cash will not be received until the bond’s maturity.

As a preferred alternative, short-term rates such as the 91-day Treasury Bill¹³ provide the same protection against the risk of default. Moreover, they provide the added protection against inflation risk by cycling maturities to meet needed cash flows and avoid the tax disadvantages of long-term

¹⁰ Rates shown are the geometric averages for the identified periods of time using data from the following sources:

- U.S. Bureau of Labor Statistics - Inflation (Consumer Price Index, All Urban Consumers (CPI-U), U.S. City Average 2019) , Wage Growth (National Employment, Hours, and Earnings: Average Hourly Earnings of Production Workers 2019) , and Compensation Growth (Major Sector Productivity and Costs Index: Business Sector, Hourly Compensation 2019)
- Federal Reserve Bank – 91-day Treasury Bill (3-Month Treasury Bill Secondary Market Rate Discount Basis 2018) and 10-year Treasury Note (Market Yield on US Treasury Securities at 10-year Constant Maturity Quoted on Investment Basis 2018).

¹¹ 10-year Treasury Bonds did not exist until 1962.

¹² This imputed interest is known as *accretion*.

¹³ We note that the U.S. Treasury also offers instruments of even shorter duration: 4-week Treasury Bills. These instruments have only been available since 2001, so they do not have a long-term measurable trend. However, in their tenure, they generally have a rate of return comparable to 91-day Treasury Bills.

bonds. Choice of a 91-day Treasury as a measure of the risk-free discount rate is supported in financial literature and in forensic economic articles such as Pelaez (1989), Lawlis and Male (1994), and Altmann (2002).

Some alternatives occasionally proposed by other experts include the following:

- **Long-term Treasury Notes or Bonds** – As discussed above, these instruments all provide greater risk from inflation and may present tax disadvantages.
- **Treasury Inflation-Protected Securities (TIPS)** – Issued by the United States Treasury, TIPS bonds have an appeal of offering an instrument with no risk of default that is also protected against inflation. However, the market for these relatively new instruments is still imperfect as noted in many articles including Shen and Corning (2001) and Kopcke and Kimball (1999). This has even resulted in negative inflation-adjusted yields (Gongloff 2008).
- **Municipal Bonds** – High-grade debt instruments may provide less risk than the corporate bond market. However, as demonstrated in past financial crises and likely in the current economic environment, they are far from the level of protection offered by U.S. Treasury instruments.
- **Stock Market** – Although some may proffer discount rates derived from general stock market returns, in no event can these be considered to meet the requirements of risk-free rates, regardless of the stature of the companies included. This is certainly demonstrated by the market performance in the economic crisis that began in 2008.

Thus, in our opinion, at the time of this writing, the nature of claims and known court guidelines mandate use of a risk-free discount rate when valuing lost earnings. The best measure of this rate is offered by a 91-day Treasury bill.

Present Value Calculation

There are two important variables to be considered in arriving at the present value of a future loss of earning capacity. The first is the growth factor to be used. The second is the discount factor. If the growth factor is greater than the discount factor, a net negative discount results. If a pure offset, also referred to as a net neutral discount, is used to arrive at present value, the growth factor is equal to the discount factor, resulting in a present value sum less than the value achieved if a net negative discount is used. A third approach to arriving at present value is referred to as a net positive discount. The discount factor is assumed to be greater than the growth factor, resulting in a present value sum less than the value achieved if a net neutral discount is used.

The standard methodology employed in arriving at a present value calculation embraces the following formula:

$$PV = \sum CF \left(\frac{1+G}{1+D} \right)^n$$

PV = Present Value

\sum CF = Summation of the cash flows

G = Growth rate for compensation

D = Discount rate of interest rate

n = years of compounding and discounting

All present value calculations utilize the same methodology. Different present value sums are derived as a function of the growth and discount factor used. When a pure offset is used, the growth and discount factors are set as equal to one another. The effect neutralizes the future cash flows resulting in a net neutral discount. Therefore, the summation of each of the future cash flows stated in terms of today's dollars becomes the present value.

Economic literature provides substantial support for a total offset to value lost earnings. Altmann (2002, 40) reviews historical cycles and notes that any disturbance between equilibrium of growth and discount rates tends to be temporary due to "powerful economic forces" that cause the net discount rate to regress to 0%. Lawlis and Male (1994) found a random walk relationship between growth and interest and held that a total offset is the least potentially biased net discount rate.

Brody (1982) observed that with risk held to 0%, the only factors to consider are productivity gains (growth) and the real interest rate. He held that a total offset had been the most accurate net discount rate in the preceding twenty years.

Carlson (1976, 628) noted that when inflation is fully anticipated by the financial and labor markets, wage increases and bond yields were essentially equal. He held that use of a total offset was not only accurate but eliminated much of the confusion generated in courtrooms debating the appropriate rates, classifying such debate as "just plain silly and unnecessary."

Pelaez (1989, 59) found a total offset to be a "robust alternative to the pursuit of illusory exactness based on time consuming calculations and dubious prognostications." In a subsequent article, Pelaez (1995) affirmed the total offset's superiority when considering real interest and growth rates.

Schwartz and Thornton (1991) affirmed much of the above observations. Schwartz (1997, 93) updated his opinions, noting the fallacy of trying to measure movements of earnings and interest rates on short-term trends. He held "over the longer run, the relation between the basic real interest rate and the productivity growth rate does seem to approach equality." Schwartz (2000) affirmed his findings yet again a few years later, noting that use of a total offset is not only fair, but efficient because of its ability to reduce many complications and costs of litigation.

More recently, Stern (2005) confronted the myths associated with "discounting to present value." He provides examples of why it is not necessary to reduce a future earnings loss below the value of today's dollars.

Summary

The attached VEA conforms to the principles identified in this VER. The lifetime loss of earning capacity is derived through a five-step model involving a definition of pre-injury earning capacity, pre-injury worklife expectancy, post-injury earning capacity, post-injury worklife expectancy, and a present value calculation. Each step in the assessment pertaining to lifetime earning potential is geared to the unique traits and characteristics of the individual. The present value of the lost earnings is an estimate of the measurable economic damages sustained by the individual.

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WORKLIFE EXPECTANCY
AMERICAN COMMUNITY SURVEY

A worklife expectancy statistically estimates how long a person will work over a lifetime. Predictors of worklife are age, level of educational attainment, gender, and disability status. The likelihood of work is calculated from a specific age through the end of the analysis. Each statistical interval in the worklife pattern represents the joint probability that an individual is alive, in the labor force, and actually employed. The statistical intervals are then summed thereby determining the worklife expectancy in years, the format in which worklife expectancies are typically presented.

Sources:

National Center for Health Statistics, Life Tables home page:
<http://www.cdc.gov/nchs/products/pubs/pubd/lftbls/life/1966.htm>

US Census Bureau. Public Use Data Files from the American Community Survey. ACS
Website: <http://www.census.gov/acs/www/index.html>

Worklife Probability
Joann Haysbert
Non-severe Cognitive Disability - Statistical WL

	ND	CD	Value/Diff
Birth Year			1948
Injury Date			5/23/2018
Analysis Date			6/22/2021
Base Wage	204,650	204,650	0.0%
Fringe Rates	14.2%	14.2%	
Education Level	Doctorate Degree	Doctorate Degree	
Gender Life/Emp.			Both
Disab. Status	Not Disabled	Cognitive Nonsevere	
Growth/Discount			Pure Offset
Future Worklife	2.3	1.6	31.9%
Total Earnings	537,068	365,524	171,544

			ND					CD			
Mo/Yr	Age	Years	Prob. Life	Prob. Empl.	Prob. Work	Base Earning	Adjusted Earnings	Prob. Empl.	Prob. Work	Base Earning	Adjusted Earnings
6/2021	72.75	0.25	0.974	0.373	0.091	204,650	21,268	0.169	0.041	204,650	9,582
9/2021	73.00	1.00	0.946	0.373	0.353	204,650	82,500	0.169	0.160	204,650	37,394
9/2022	74.00	1.00	0.916	0.373	0.342	204,650	79,929	0.169	0.155	204,650	36,225
9/2023	75.00	1.00	0.885	0.231	0.204	204,650	47,677	0.212	0.188	204,650	43,938
9/2024	76.00	1.00	0.851	0.231	0.197	204,650	46,041	0.212	0.180	204,650	42,068
9/2025	77.00	1.00	0.815	0.231	0.188	204,650	43,938	0.212	0.173	204,650	40,432
9/2026	78.00	1.00	0.778	0.231	0.180	204,650	42,068	0.212	0.165	204,650	38,562
9/2027	79.00	1.00	0.739	0.231	0.171	204,650	39,964	0.212	0.157	204,650	36,693
9/2028	80.00	1.00	0.697	0.141	0.098	204,650	22,904	0.087	0.061	204,650	14,256
9/2029	81.00	1.00	0.654	0.141	0.092	204,650	21,501	0.087	0.057	204,650	13,321
9/2030	82.00	1.00	0.610	0.141	0.086	204,650	20,099	0.087	0.053	204,650	12,387
9/2031	83.00	1.00	0.563	0.141	0.079	204,650	18,463	0.087	0.049	204,650	11,452
9/2032	84.00	1.00	0.515	0.141	0.073	204,650	17,061	0.087	0.045	204,650	10,517
9/2033	85.00	1.00	0.467	0.078	0.036	204,650	8,414	0.043	0.020	204,650	4,674
9/2034	86.00	1.00	0.418	0.078	0.033	204,650	7,712	0.043	0.018	204,650	4,207
9/2035	87.00	1.00	0.369	0.078	0.029	204,650	6,778	0.043	0.016	204,650	3,739
9/2036	88.00	1.00	0.320	0.078	0.025	204,650	5,843	0.043	0.014	204,650	3,272
9/2037	89.00	1.00	0.273	0.078	0.021	204,650	4,908	0.043	0.012	204,650	2,805
Future Totals		17.25			2.298		537,068		1.564		365,524
Future Loss											171,544

Citations

Arias, Elizabeth and Jiaquan Xu. National Vital Statistics Reports, vol. 69 no. 12, United States Life Tables, 2018. National Center for Health Statistics, U.S. Center for Disease Control and Prevention, Hyattsville, MD, 2020.

<https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr69-12-508.pdf> (accessed November 2020).

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6/22/2021

Worklife Probability
Joann Haysbert
Non-severe Cognitive Disability - Assumed WL

	ND	CD	Value/Diff
Birth Year			1948
Injury Date			5/23/2018
Analysis Date			6/22/2021
Base Wage	204,650	204,650	0.0%
Fringe Rates	14.2%	14.2%	
Education Level	Doctorate Degree	Doctorate Degree	
Gender Life/Emp.			Both
Disab. Status	Not Disabled	Cognitive Nonsevere	
Growth/Discount			Pure Offset
Future Worklife	7.3	1.6	78.4%
Total Earnings	1,694,398	365,524	1,328,874

			ND					CD			
Mo/Yr	Age	Years	Prob. Life	Prob. Empl.	Prob. Work	Base Earning	Adjusted Earnings	Prob. Empl.	Prob. Work	Base Earning	Adjusted Earnings
6/2021	72.75	0.25	1.000	1.000	0.250	204,650	58,428	0.169	0.041	204,650	9,582
9/2021	73.00	1.00	1.000	1.000	1.000	204,650	233,710	0.169	0.160	204,650	37,394
9/2022	74.00	1.00	1.000	1.000	1.000	204,650	233,710	0.169	0.155	204,650	36,225
9/2023	75.00	1.00	1.000	1.000	1.000	204,650	233,710	0.212	0.188	204,650	43,938
9/2024	76.00	1.00	1.000	1.000	1.000	204,650	233,710	0.212	0.180	204,650	42,068
9/2025	77.00	1.00	1.000	1.000	1.000	204,650	233,710	0.212	0.173	204,650	40,432
9/2026	78.00	1.00	1.000	1.000	1.000	204,650	233,710	0.212	0.165	204,650	38,562
9/2027	79.00	1.00	1.000	1.000	1.000	204,650	233,710	0.212	0.157	204,650	36,693
9/2028	80.00	1.00						0.087	0.061	204,650	14,256
9/2029	81.00	1.00						0.087	0.057	204,650	13,321
9/2030	82.00	1.00						0.087	0.053	204,650	12,387
9/2031	83.00	1.00						0.087	0.049	204,650	11,452
9/2032	84.00	1.00						0.087	0.045	204,650	10,517
9/2033	85.00	1.00						0.043	0.020	204,650	4,674
9/2034	86.00	1.00						0.043	0.018	204,650	4,207
9/2035	87.00	1.00						0.043	0.016	204,650	3,739
9/2036	88.00	1.00						0.043	0.014	204,650	3,272
9/2037	89.00	1.00						0.043	0.012	204,650	2,805
Future Totals		17.25			7.250		1,694,398		1.564		365,524
Future Loss											1,328,874

Citations

Arias, Elizabeth and Jiaquan Xu. National Vital Statistics Reports, vol. 69 no. 12, United States Life Tables, 2018. National Center for Health Statistics, U.S. Center for Disease Control and Prevention, Hyattsville, MD, 2020.
<https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr69-12-508.pdf> (accessed November 2020).
U. S. Census Bureau. 2020. "American Community Survey (ACS) PUMS Data. 2015-2019 1-year PUMS files."
<https://www.census.gov/programs-surveys/acs/data/pums.html> (accessed October 2020).

6/22/2021



June 23, 2021

Nazareth Haysbert
Attorney at Law
Haysbert Moultrie LLP
4640 Admiralty Way
Suite 500
Marina Del Rey, CA 90292

RE: Joann Wright Haysbert

Dear Mr. Haysbert:

The attached Medical Care Cost Summary reveals that the money needed by Joann Wright Haysbert for future health and medical care is \$1,389,517. This figure is stated in terms of present value, based upon the range of treatment options and treatment costs of the underlying life care plan. This figure considers appropriate long-term and short-term rates of interest and medical care increases in the areas of commodities and services.

Table 1 examines the interrelationship over time between the rate of medical cost changes and the rate of interest. An inspection of the table reveals fluctuation over time. However, both long-term and short-term rates of increase in medical services have exceeded the rates of increase in medical and non-medical commodities over the same time frame. A present value calculation based on historical data assumes that a similar trend will persist in the future.

The current cost of the money needed by Ms. Haysbert for future health and medical care is \$1,382,003. This figure is stated in terms of 2021 dollars. This figure will be sufficient to meet her long-term health and medical care needs if it is assumed that the long-term rise in the cost of medical care and services will be offset by a conservative and safe investment, such as a 91-day Treasury bill.

Sincerely,
VOCATIONAL ECONOMICS, INC.

For the Firm

A handwritten signature in black ink that reads 'Enrique Vega'. The signature is written in a cursive, flowing style.

Enrique Vega, MS, CRC, CDMS

/lr

TABLE 1

(Shown in Percentages)

Period	All Items ¹	Medical Services ¹	Hospital & Related Services ¹	Medical Commod. ¹	Compensation ²	Interest Rate* ³
1960-2020	3.7	5.8	7.4	3.6	4.9	4.6
1970-2020	3.9	5.9	7.5	4.3	4.8	4.6
1980-2020	2.9	5.2	6.7	4.1	4.0	4.0
1990-2020	2.3	4.2	5.6	2.9	3.4	2.5
2000-2020	2.1	3.8	5.5	2.4	3.1	1.4
2010-2020	1.7	3.2	4.2	2.0	3.0	0.6

1. U.S. Bureau of Labor Statistics. Consumer Price Index, All Urban Consumers (CPI-U), U.S. City Average.
2. U.S. Bureau of Labor Statistics. Major Sector Productivity and Costs Index: Hourly Compensation.
3. Federal Reserve Bank. 3-Month Treasury Bill Rate (Secondary Market), Averages of Daily Closing Bid Prices.

*Ninety-one day U.S. Treasury Bill Yields

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
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Present Age:	72
Life Expectancy:	16 *
Age of Death:	88.0

Rates Used (Nominal)								
Type	Abbr	Short-term			Long-term			
		Grow.	Disc.	Net.	Grow.	Disc.	Net.	
General Inflation	CPI	1.7%	2.6%	0.88% Disc	3.7%	4.6%	0.87% Disc	
Medical Services	MS	3.2%	2.6%	0.58% Grow	5.8%	4.6%	1.15% Grow	
Hospital Services	HS	4.2%	2.6%	1.56% Grow	7.4%	4.6%	2.68% Grow	
Medical Commodities	MC	2.0%	2.6%	0.59% Disc	3.6%	4.6%	0.97% Disc	
Compensation	CMP	2.6%	2.6%	0.00% Disc	4.6%	4.6%	0.00% Disc	

Analyses Included

1 Base Case

* Arias, Elizabeth and Jiaquan Xu. National Vital Statistics Reports, vol. 68 no. 7, United States Life Tables, 2017. National Center for Health Statistics, U.S. Center for Disease Control and Prevention, Hyattsville, MD, 2019. https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_07-508.pdf (accessed June 2019).

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Evaluations								
Internal Medicine	MS	All	Age 73 to 88 (Life Expectancy)	15	2 Times per Year	\$656.66	\$9,850	\$10,921
Traumatic Brain Injury Specialists	MS	All	Age 73 to 88 (Life Expectancy)	15	Annually	\$328.33	\$4,925	\$5,461
Ophthalmology	MS	All	Age 73 to 88 (Life Expectancy)	15	2-year intervals	\$162.24	\$2,434	\$2,698
Optometry	MS	All	Age 73 to 88 (Life Expectancy)	15	Annually	\$101.66	\$1,525	\$1,691
Evaluations Totals								
Analysis: All Analyses								
						Medical Services (0.58% Grow/1.15% Grow)	\$18,734	\$20,771

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
<i>Treatments and Therapies</i>								
33 Point Botox Injections	MS	All	Age 73 to 85	12	Annually	\$905.45	\$10,865	\$11,838
Neurocognitive Rehabilitation	MS	All	Age 73 to 74	1	60 Total Times During Span	\$6,150.00	\$6,150	\$6,222
Neuropsychological Evaluation	MS	All	Age 73 to 76	3	Annually	\$10,931.89	\$32,796	\$33,370
	MS	All	Age 77 to 88 (Life Expectancy)	11	5-year Intervals	\$2,186.38	\$24,050	\$27,261
Neurocognitive Rehabilitation	MS	All	Age 74 to 88 (Life Expectancy)	14	24 Times per Year	\$2,460.00	\$34,440	\$38,396
<i>Treatments and Therapies Totals</i>								
Analysis: All Analyses								
						Medical Services (0.58% Grow/1.15% Grow)	\$108,301	\$117,087

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
<i>Future Diagnostics</i>								
Diffusion Tensor Imaging	MS	All	Age 73 to 85	12	5-year Intervals	\$2,636.16	\$31,634	\$34,468
MRI of the Brain	MS	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$473.56	\$7,103	\$7,876
SPECT Scan	MS	All	Age 75 to 88 (Life Expectancy)	13	5-year Intervals	\$674.68	\$8,771	\$9,833
<i>Future Diagnostics Totals</i>								
Analysis: All Analyses								
						Medical Services (0.58% Grow/1.15% Grow)	\$47,508	\$52,177

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Medications								
Tylenol	MC	All	Age 73 to 83	10	6 Times per Year	\$21.42	\$214	\$201
Alpha Lipoic Acid	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$379.92	\$5,699	\$5,229
CoEnzyme Q10	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$256.44	\$3,847	\$3,530
Fish Oil/Omega 3 Supplements	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$342.24	\$5,134	\$4,710
Glucoraphanin	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$520.92	\$7,814	\$7,169
Magnesium L Threonate	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$397.08	\$5,956	\$5,465
N-Acetyl Cysteine	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$171.84	\$2,578	\$2,365
Phosphatidylserine	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$350.28	\$5,254	\$4,821
Vitamin D3	MC	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$172.44	\$2,587	\$2,373
Cefaly Device	MC	All	Age 73 to 83	10	Annually	\$499.00	\$4,990	\$4,689
Cefaly Electrodes	MC	All	Age 73 to 83	10	4 Times per Year	\$100.00	\$1,000	\$940

Medications Totals

Analysis: All Analyses

Medical Commodities (0.59% Disc/0.97% Disc) \$45,073 \$41,492

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Laboratory Studies								
Complete Blood Count	MS	All	Age 73 to 88 (Life Expectancy)	15	2 Times per Year	\$277.94	\$4,169	\$4,622
Comprehensive Metabolic Panel	MS	All	Age 73 to 88 (Life Expectancy)	15	2 Times per Year	\$612.92	\$9,194	\$10,194
Urinalysis	MS	All	Age 73 to 88 (Life Expectancy)	15	2 Times per Year	\$227.12	\$3,407	\$3,778
Laboratory Studies Totals								
Analysis: All Analyses								
						Medical Services (0.58% Grow/1.15% Grow)	\$16,770	\$18,594

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Rehabilitation Services								
Cognitive/Behavioral Therapy	CMP	All	Age 73 to 75	2	12 Times per Year	\$3,753.96	\$7,508	\$7,508
Gym Membership	CMP	All	Age 73 to 88 (Life Expectancy)	15	12 Times per Year	\$403.92	\$6,059	\$6,059
Occupational Therapy	CMP	All	Age 73 to 74	1	36 Times per Year	\$4,266.00	\$4,266	\$4,266
	CMP	All	Age 74 to 88 (Life Expectancy)	14	12 Times per Year	\$1,422.00	\$19,908	\$19,908
Work Hardening	CMP	All	Age 73 to 74	1	24 Times per Year	\$8,268.00	\$8,268	\$8,268
Speech Language Therapy	CMP	All	Age 73 to 74	1	24 Times per Year	\$5,820.00	\$5,820	\$5,820
	CMP	All	Age 74 to 88 (Life Expectancy)	14	8 Times per Year	\$1,940.00	\$27,160	\$27,160
Rehabilitation Services Totals								
Analysis: All Analyses								
Compensation (0.00% Disc/0.00% Disc)							\$78,989	\$78,989

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Medical Equipment and Supplies								
Heating Pad	MC	All	Age 73 to 88 (Life Expectancy)	15	Annually	\$55.42	\$831	\$763
Ice Pack	MC	All	Age 73 to 88 (Life Expectancy)	15	6 Times per Year	\$75.42	\$1,131	\$1,038
Reacher	MC	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$5.97	\$90	\$82
Bed Hand Rails	MC	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$87.08	\$1,306	\$1,198
Ear Plugs	MC	All	Age 73 to 88 (Life Expectancy)	15	Annually	\$89.95	\$1,349	\$1,238
Rose-tinted Glasses	MC	All	Age 73 to 88 (Life Expectancy)	15	Annually	\$147.33	\$2,210	\$2,027
Pillbox	MC	All	Age 73 to 88 (Life Expectancy)	15	3-year intervals	\$22.21	\$333	\$306
Notebook, calendar, Post-its, etc.	MC	All	Age 73 to 88 (Life Expectancy)	15	3-year intervals	\$50.00	\$750	\$688
Medical Equipment and Supplies Totals								
Analysis: All Analyses								
Medical Commodities (0.59% Disc/0.97% Disc)							\$8,000	\$7,340

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
<i>Home Alterations and Furnishings</i>								
Bathtub Safety Rail	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$15.59	\$234	\$216
Hand-held Showerhead	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$16.45	\$247	\$228
Shower Chair	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$13.98	\$210	\$194
Shower Hose	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$7.15	\$107	\$99
Toilet Safety Rail	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$17.14	\$257	\$238
<i>Home Alterations and Furnishings Totals</i>								
Analysis: All Analyses								
General Inflation (0.88% Disc/0.87% Disc)							\$1,055	\$975

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Personal Care and Home Services								
Home Health Aide	CMP	All	Age 73 to 78	5	104 Times per Year	\$32,409.52	\$162,048	\$162,048
	CMP	All	Age 78 to 83	5	208 Times per Year	\$64,819.04	\$324,095	\$324,095
	CMP	All	Age 83 to 88 (Life Expectancy)	5	312 Times per Year	\$97,228.56	\$486,143	\$486,143
Personal Care and Home Services Totals								
Analysis: All Analyses								
Compensation (0.00% Disc/0.00% Disc)							\$972,286	\$972,286

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Transportation								
Ambulatory Services	CPI	All	Age 73 to 88 (Life Expectancy)	15	208 Times per Year	\$4,667.52	\$70,013	\$64,807

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
<i>Therapeutic Services</i>								
Recreational Therapy	CMP	All	Age 73 to 78	5	24 Times per Year	\$2,316.00	\$11,580	\$11,580

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

	Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
<i>Vocational Equipment</i>								
High Contrast Keyboard	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$6.52	\$98	\$90
Wireless Ergonomic Mouse	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$21.33	\$320	\$296
Blue Light Blocking Screen Protector	CPI	All	Age 73 to 88 (Life Expectancy)	15	5-year Intervals	\$21.47	\$322	\$298
White Board	CPI	All	Age 73 to 88 (Life Expectancy)	15	2 Times per Year	\$135.96	\$2,039	\$1,888
Recording Device	CPI	All	Age 73 to 88 (Life Expectancy)	15	Annually	\$43.66	\$655	\$606
Large Calendar	CPI	All	Age 73 to 88 (Life Expectancy)	15	2 Times per Year	\$17.32	\$260	\$241
<i>Vocational Equipment Totals</i>								
Analysis: All Analyses								
General Inflation (0.88% Disc/0.87% Disc)							\$3,694	\$3,419

Life Care Plan for: Joann Haysbert

Attorney: Nazareth Haysbert

Planner: Huma Haider

Rate	Anal	Duration	Yrs.	Frequency	Annual Cost	Current Cost	Present Value
Analysis Totals							
Analysis: Base Case							
				Compensation (0.00% Disc/0.00% Disc)		\$1,062,855	\$1,062,855
				General Inflation (0.88% Disc/0.87% Disc)		\$74,762	\$69,201
				Medical Commodities (0.59% Disc/0.97% Disc)		\$53,073	\$48,832
				Medical Services (0.58% Grow/1.15% Grow)		\$191,313	\$208,629
				Grand Total		\$1,382,003	\$1,389,517

ENRIQUE N. VEGA, M.S., C.R.C., C.D.M.S. CURRICULUM VITAE

EDUCATION

- 2018 Master of Science Degree – Applied Economics/Financial Economics**
Johns Hopkins University – Krieger School of Arts and Sciences
Omicron Delta Epsilon, International Honors Society in Economics
- 2005 Master of Science Degree – Rehabilitation Counseling.**
California State University Los Angeles, College of Education
Department Honors (G.P.A.: 3.98)
- 1991 Bachelor of Arts Degree – Comparative Literature (Spanish, English, French)**
Yale University, New Haven, CT
Cum Laude Honors

CERTIFICATIONS

- 2007 U.S. Department of Labor Certified Counselor**, Office of Workers' Compensation Programs (OWCP) San Francisco, CA Certification, #104595
- 2007 Certified Disability Management Specialist**, The Certification of Disability Management Specialist Commission (CDMSC), Schaumburg, IL Certification #94052
- 2006 Certified Rehabilitation Counselor**, Commission on Rehabilitation Counselor Certification, Schaumburg, IL Certification #94052

PROFESSIONAL ASSOCIATIONS & DESIGNATIONS

- American Economic Association, Member
- American Rehabilitation Economic Association (AREA), Board Member 2019 -
- California Association of Reemployment and Retraining Professionals (CARRP), May 1996 – Feb. 2007
 - President 2007
 - President-Elect 2006
 - Los Angeles Regional Coordinator (2003 – 2005)
- International Association of Rehabilitation Professionals (IARP)
 - California Chapter Past President 2008 – 2010
 - Disability Management Board Member, 2007 – 2011
- National Association Rehabilitation (NRA) Member
- National Rehabilitation Counseling Association (NCRA) Member
- Independent Vocational Evaluator (IVE) California State
- Social Security Vocational Expert

CONTINUING EDUCATION

Completed courses, seminars and sessions sponsored by the following institutions and associations from 1991 to the present:

American Board of Vocational Experts
American Rehabilitation Economics Association
California Association of Rehabilitation and Re-Employment Professionals
California Workers' Compensation Institute
International Association of Rehabilitation Professionals
California Association of Applicant Attorneys

PROFESSIONAL EXPERIENCE

1999 – Present **Access Employment Network/Woodland Hills & Ventura, CA**
Choices Vocational Rehabilitation
Owner/Sr. Vocational Rehabilitation Counselor

Provide bilingual (English/Spanish) vocational rehabilitation services including counseling, vocational exploration, labor market and school research, plan development, monitoring, and job placement. Develop essential function job analyses for a wide variety of employment settings. Manage the daily operations of a rehabilitation consulting firm. Work as a consultant and provide expert testimony for Social Security disability claims. This company is an approved Employment Network (EN) for social security disability beneficiaries who participate in the Ticket-to-Work program. This company is under contract with the U.S. Department of Labor, Office of Workers' Compensation Program (OWCP).

Vocational Rehabilitation Counseling

- Provide rehabilitation counseling for English and Spanish-speaking injured workers and clients
- Experienced Agreed Vocational Evaluator and Independent Vocational Evaluator
- Assess transferable skills, analyze jobs and essential functions, and coordinate reasonable accommodations if necessary
- Facilitate vocational exploration, and research training options and labor markets
- Administer and interpret vocational tests and evaluate vocational feasibility
- Develop, implement, and monitor vocational rehabilitation plans for disabled adults
- Provide job seeking skills training and job placement assistance
- Review medical restrictions and assess vocational skills to recommend permanent job modifications or alternate employment

2009 – Present **Vocational Economics, Inc., Los Angeles, CA**
Vocational Economic Analyst

Conduct vocational economic assessments regarding loss of future earning capacity in cases of disability. Analyses focus on partial or total loss of access to jobs in the open labor market. Conduct assessment of loss of household services as a result of a permanent medical impairment. Perform present value calculations on loss of earning capacity, loss of household services and life care plans. Thorough understanding of government data regarding employment rates of

persons with disabilities. Examination and use of employment rates data emanating from the U.S. Census Bureau when conducting assessments of loss of earning capacity.

2006 – 2009 Mirfak Associates, Inc., Sherman Oaks, CA
Rehabilitation Consultant

Conduct comprehensive vocational rehabilitation evaluations in Spanish and English to assess employability and earning capacity. Provide vocational research, evaluation of labor markets, vocational testing, transferable skills analysis, preparation of job descriptions, and expert testimony. Assess diminished future earning capacity for post 1/1/05 cases.

1/96 - 2/99 CorVel Corporation, Los Angeles, CA
Bilingual Vocational Counselor

Assisted injured workers to return to the competitive labor force within the Workers' Compensation System. Managed caseload, wrote monthly reports; coordinated work evaluations, technical schools, medical reports, legal advice, and placement activities to implement rehabilitation plans. Continuous interfacing with workers (English/Spanish), insurance companies, medical offices, attorneys, and CA officials. Performed Job Analyses and analyzed hundreds of jobs. Developed Job Descriptions and provided information to potentially eligible injured workers. Worked with large, national employers such as Boeing, HCA Columbia Hospitals, Lucent Technologies, Wells Fargo, Lockheed Martin, Nestle, Dean Witter, and AT&T.

4/94 - 12/95 Perez & Co., Northridge, CA
Bilingual Vocational Counselor

Performed same duties as outlined above.

8/91 - 3/94 Rehabilitation Resource, Los Angeles, CA
Bilingual Rehabilitation Counselor

Started as a Job Developer, and became Vocational Counselor within six months. Performed similar duties as outlined above.

LANGUAGES

Verbal and written fluency in Spanish, English and French

PRESENTATIONS

- Sep 2019 *Speaker*, "Vocational Analysis in Permanent Disability Evaluations" presented at the San Fernando Valley Bar Association (SFVBA), Encino, CA
- Jul 2019 *Speaker*, "Evaluating Permanent Disability" presented at the American Association for Justice (AAJ) annual conference, San Diego, California
- May 2019 *Speaker*, "What Work and Earnings Could the Child Have Expected" presented at the 2019 Annual Spring Conference of the American Rehabilitation Economics Association (AREA), Fort Lauderdale, FL.

- Oct 2018 *Speaker*, “Labor Code Section 4660 v. Labor Code Section 4662(b)” presented at Los Angeles Valley Attorneys’ Association (LAVAA), Sherman Oaks, California
- Apr 2018 *Panelist*, “Medical vs. Vocational Apportionment II” presented at the annual 2018 California Applicant Attorneys’ Association (CAA) Hawaii Seminar, Wailea, Hawaii
- Mar 2018 *Co-Speaker* with Chris Reyes, MS, CRC “Loss of Earning Capacity from Brain Injury” presented at the 31st Annual Legal Conference on Legal Issues in Brain Injury, North American Brain Injury Society (NABIS) Houston, Texas
- Apr 2017 *Panelist*, “Medical vs. Vocational Apportionment” presented at the annual 2017 California Applicant Attorneys’ Association (CAA) Hawaii Seminar, Wailea, Hawaii
- Jan 2017 *Panelist*, “How to Handle Brain Injury, Stroke, and Other Catastrophic Cases” presented at the annual 2017 California Applicant Attorneys’ Association (CAA) Winter Conference, San Diego, California
- Sept 2014 *Co-Speaker* with Jackie Vega-Velez, MSC, MA, CRC, and Anthony Gamboa, Ph.D., “Measuring Earning Capacity Loss” presented at the Fall Conference of the Louisiana Association for Justice, New Orleans, Louisiana
- June 2014 *Co-Speaker* with Anthony Gamboa, Ph.D., “Understanding Worklife Expectancy” presented at the Annual Conference of the American Rehabilitation Economics Association, Reno, Nevada
- Mar 2014 *Co-Speaker* with Anthony Gamboa, Ph.D., “Altering the Definition of Cognitive Disability: Its Effects on Earnings and Worklife Expectancy” presented at the 27th Annual Legal Conference on Brain Injury, North American Brain Injury Society, San Francisco, California
- Jan 2014 *Speaker*, “The Definition of Permanent Disability and Ensuring Accurate Ratings” presented at the annual California Applicant Attorneys’ Association (CAA) Winter Conference, Rancho Mirage, California
- Nov 2013 *Speaker*, “Measuring Earning Capacity Loss” presented a California Continuing Legal Education seminar, Los Angeles, California
- Nov 2013 *Speaker*, “Using the Vocational Expert for an Accurate Permanent Disability Rating” presented at Los Angeles Valley Attorneys’ Association (LAVAA), Sherman Oaks, California
- Nov 2013 *Speaker*, “Damage Evidence in TBI Case – Use of the Vocational/Economics Expert” presented at the 14th Annual Neuroscience of Brain Injury Conference Brain Injury Association of California, Napa, California

- Jan 2013 *Speaker*, “Defusing Vocational Bombs” presented at the American Association for Justice (AAJ) Education’s Social Security Success! Seminar, New Orleans, Louisiana
- Nov 2011 *Speaker*, “Case Law: Current Court Decisions Every Vocational Expert Should Know” presented at the 2011 Annual Forensic Conference of the International Association of Rehabilitation Professionals (IARP), Las Vegas, Nevada
- April 2011 *Speaker*, “Careers in Rehabilitation Counseling” presented by the Los Angeles Chapter of the California Career Development Association (CCDA), California State University, Northridge, California
- Jan 2011 *Speaker*, “Worklife Expectancy Tables – Theory and Applications” presented at the *VocEx 2011* conference of the California Chapter of the International Association of Rehabilitation Professionals (IARP) LAX Hilton, Los Angeles, California
- Nov 2010 *Speaker*, “Educational Pays” presented for the *Goodwill Good Guys* program, Goodwill Industries, New Orleans, Louisiana
- Oct 2010 *Speaker*, “Helping SSA Beneficiaries with Disabilities Choose Work” presented at the *Choose to Work Tour* sponsored by the Social Security Administration Ticket to Work Partner Training Program, Los Angeles, California
- June 2010 *Speaker*, “Measuring Earning Capacity Loss” presented at the Western Trial Lawyers Association annual conference, Maui, Hawaii
- May 2010 *Speaker*, “SSDI and SSI: Options for Returning to Competitive Employment” Webinar produced by the International Association of Rehabilitation Professionals (IARP), Glenview, Illinois. Available at www.rehabpro.org
- Feb 2010 *Speaker*, “Ethics of Cultural Diversity” presented at the International Association of Rehabilitation Professionals (IARP) Case Management/Disability Management annual conference, Scottsdale, Arizona
- June 2009 *Speaker*, “The Impact of Disability on Worklife and Earnings” presented at the Western Trial Lawyers Association annual conference, Maui, Hawaii
- April 2009 *Speaker*, “Assessing Losses of Earnings in Infant and Children” presented at the Personal Injury Litigators Summit, Las Vegas, Nevada
- April 2008 *Speaker*, “Historical Development of the Future Earning Capacity Factor as Applied to the California Schedule for Rating Permanent Disabilities” and “A Successful and Ethical Plan for Managing DFEC Practice” presented at the American Board of Vocational Experts (ABVE) annual conference, San Diego, California
- March 2008 *Speaker*, “Calculating Diminished Future Earning Capacity” presented at the Association of Workers Compensation Professionals (AWCP), Pomona,

California

- March 2008 *Speaker*, “The Benefits of Becoming an Employment Network” presented at the 2008 Ticket Partners Summit, sponsored by the Social Security Administration and the NEW Ticket to Work Program, Louisville, Kentucky
- 2007 – 2008 *Speaker*, “Careers in Business and Finance” presented at the Merrill Lynch Business Institute through Project GRAD (Graduation Really Achieves Dreams) Los Angeles, a non-profit organization helping 20,000 students in the Northeast San Fernando Valley, in partnership with the Los Angeles Valley College (LAVC), San Fernando, California
- Nov 2007 *Speaker*, “Earning Capacity Data, Methodology and Thinking Outside the Box” presented at the 2007 Annual Forensic Conference of the International Association of Rehabilitation Professionals (IARP), Las Vegas, Nevada
- May 2007 *Speaker*, “Determining Diminished Future Earning Capacity (DFEC), the California Model” presented at the 2007 Annual Spring Conference of the American Rehabilitation Economics Association (AREA), Pittsburg, PA
- Feb 2007 *Speaker*, “Emerging Markets for Rehabilitation Professionals” presented at the California Association of Rehabilitation and Retraining Professionals (CARRP) winter conference, San Francisco, California
- Sep 2006 *Speaker*, “Determining Diminished Earning Capacity” presented at Los Angeles Valley Attorneys’ Association (LAVAA), Sherman Oaks, California
- Jul 2006 *Speaker*, “Loss of Earning Capacity Evaluations and the Diminished Earning Capacity Formula” presented at Louie, Stettler & Liebher, LLP, Glendale, California

PUBLICATIONS

- Vega, E., Crouse, J., (2017). Worklife Expectancy and Disability in the Forensic Arena: A Response to Chapter 20 “Worklife Expectancy Models and Concepts” in Rick Robinson’s *Foundations of Forensic Vocational Rehabilitation. The Rehabilitation Professional*. Vol. 25(1). 59 – 66.
- Crouse, J., Reyes, T., Vega, E. (2015). Measuring worklife expectancy: Debunking the ‘try rate’ and ‘p problem.’ *The Rehabilitation Professional*. 23(3). 123-128.
- Sidlow, Phillip & Vega, Enrique. "Discounting Future Earnings to Present Value – Debunking the Myths." *Advocate*, March (2011) 94-96.
- Sidlow, Phillip & Vega, Enrique. "Disabled, but Employed and Earning More Than Before: Where’s the Loss?" *Plaintiff*, February (2011) 16-17.
- Sidlow, P. & Vega, E. N. Employed and Earning More with a Disability: Where is the Loss? *Advocate*, January (2011): 94-97.

Gamboa, A.M., Sidlow, P. & Vega, E. N. Economic Damages: What the Infant or Child Could Have Been. *Advocate*, December (2010): 80-85

Sidlow, P. & Vega, E. N. Wage Loss versus Earning Capacity and the Effect of Disability on Earnings and Worklife Expectancy. *Advocate*, November (2010): 60-67

Gamboa, A.M., Sidlow, P. & Vega, E. N. What the Infant or Child Could Have Been. Assessing Lost Future Earning Capacity of a Disabled Child. *Plaintiff*, Vol. 4, No. 11 November (2010): 80-85

Sidlow, P. & Vega, E. N. The Effect of Disability on Earnings and Worklife Expectancy. *Plaintiff*, Vol. 4, No. 10 October (2010): 60-67

Vega, E. N., Van de Bittner, E. E., Toyofuku, M. I., Van de Bittner, S. K., & Mohebbi, A. (2008). Use of Workers' Compensation Earning Capacity (WCEC) formula in determining diminished future earning capacity in California. *The Earnings Analyst*, X, 62-97.

Taylor, D., & Vega, E. (Eds.), Choppa, T., Davis, E., Dillman, E., Farnsworth, K., Field, T. F., Fountaine, J., Griffin, S., Grimes, J., Jayne, K., Johnson, C. B., Kelsay, E., Kelsay, M., Kilsher, D. G., Kilcher, J., Toyofuku, M., Van de Bittner, G., & Van de Bittner, S. (Contributors). (2007). CDMS study guide. (5th ed.). Athens, GA: Elliott & Fitzpatrick, Inc.

Vega, E. N. (2006, August). Micro-economic Factors of Placing Persons with Disabilities. *Keeping California Working*

Vega, E. N. (2006, May). Becoming an Employment Network (EN) Helps a Counselor's Bottom Line. *Keeping California Working*.

Vega, E. N. (2006, January). On Becoming a Vocational Expert, Part II. *Keeping California Working*.

Vega, E. N. (2005, November). On Becoming a Vocational Expert, Part I. *Keeping California Working*.

Vega, E. N. (2005, August). Learning to Diversify: Challenges and Myths. *Keeping California Working*.

Vega, E. N. (2005, March/April) New Website: New Challenges in a Brave New World. *Keeping California Working*.



New Case Form

To: Nazareth Haysbert
Firm: Haysbert Moultrie LLP
Client: **Haysbert, Joann Wright**
From: Enrique Vega, MS, CRC, CDMS
Address: 20700 Ventura Boulevard
Suite 220
Woodland Hills, CA 91364
Phone: (310) 533-1000

Federal Tax ID: 26-4396853

How to Submit Materials

Electronic: Whenever possible, please submit electronic documents using the following address:
<https://www.filemail.com/incoming/3236640215>
Mail: Send the signed fee agreement, informed consent form (if attached), and retainer check to:
Vocational Economics, Inc.
220 W. Main Street, Suite 2150
Louisville, KY 40202
PH: (502) 589-0995

CASE NAME: Haysbert, Joann Wright

Please submit the following case materials:

- Date of Birth, Date of Injury
- Client Telephone Number
- Full Case Name, Court Case Number and Court Name
- Plaintiff's deposition (E-transcript or full size preferred)
- Life Care Plan
- Medical/Psychological Depositions (condensed copies preferred)
- Medical/Psychological Reports (no hospital records, unless a Comprehensive Care Plan is requested), and if currently available, medical chronologies and/or summaries.
- Independent Medical Evaluations and Other Expert Reports
- W2's/Tax Returns/Most Recent Pay Stub(s) (current returns to 5 years prior to injury, if possible)
- Social Security Earnings Statement (for info on how to obtain, visit: <http://www.ssa.gov/myaccount/>)
- Current or Last Employment Information (job description, benefit information, union contracts)
- Employment History (resume or historical employment listing showing type of work)
- Please give deadline date for this report(s): _____. Reports are targeted for completion two weeks after receipt of all requested documents. Any expedited processing must be cleared in advance.

Prior to proceeding, a signed fee agreement (and if attached, a signed informed consent form) are also required; see attached.

The following expert witness from Vocational Economics, Inc. will be named in this case:

Enrique Vega

FEE AGREEMENT

Vocational Economics, Inc. is pleased to accept a referral from you. Our fees are outlined below. Please note that any travel time and expenses incurred will be billed at cost, in addition to the amounts below.

A non-refundable and non-transferable retainer in the amount of **\$8,500** is required prior to proceeding with this case. Our receipt of your retainer signifies that you agree to pay all reasonable costs associated with our services, as defined herein, and that in jurisdictions where the opposing side is billed for discovery deposition, you agree to pay such costs in the event of payment default by the opposing attorney. In the event you request additional analyses not indicated below, such work will be billed separately. It is understood that your firm, not your client or any third party, is directly responsible for any and all such costs billed by our Company for work requested by anyone employed by your firm at the time of such request(s). Permission to use Consultant's name or the name Vocational Economics, Inc., or in any way indicate that either is an expert witness or Consultant for Client's side of the case, either informally or formally with other parties, is not granted until the retainer has been paid. We are not obligated to appear for deposition or court testimony until all outstanding fees and/or costs are paid in full. Formal court proceedings that challenge the testimony of any VEI expert must be provided to our office within 24 hours of receipt by the retaining attorney.

We will complete the following checked items:

- ☒ VOCATIONAL ECONOMIC ASSESSMENT: A typical Vocational Economic Assessment, which includes interview and testing of client (if necessary), defining reduction of worklife expectancy in cases of partial or total disability, review of medical information, vocational economic analysis, and a written report by a Vocational Economic Analyst, is billed at \$6,500. Any subsequent reviews or addenda will be charged at the hourly consultation rate listed below.
- ☒ ECONOMIC ANALYSIS FOR LIFE CARE PLAN: A typical Economic Analysis for a Life Care Plan, which determines the value of future health and medical care needs and related costs, is billed at \$2,000.

Court and Deposition Time
Billed at \$650 per hour (minimum 2 hour).

Consultation Time (including Travel and Wait Time)
Billed at \$450 per hour.

Rush Fee: For rush processing, we would add up to \$1,000 to the base cost of the assessment.

A one-and-one-half percent (1-1/2%) per month, or eighteen percent (18%) per annum, service charge will be added to any unpaid balance exceeding thirty (30) days from the date of invoice. In addition, you will be responsible for costs of collection, including any reasonable attorney fees and court costs incurred in the collection of any past due balance. Vocational Economics, Inc. is committed to providing the best service possible while holding down costs associated with defining economic damages. Our policy regarding payment will help us achieve this objective.

Vocational Economics, Inc. has a team of qualified experts across the country. If, for any reason, the retained expert is unable to provide testimony, Vocational Economics, Inc. will assign another analyst from our team to testify on the retained expert's behalf.

An authorized representative of your firm must sign this document. An authorized signature indicates acceptance of the terms specified herein.

Authorized Signature: _____ Date: _____

Print Name & Title: _____ Email: _____

Firm Name/Address: _____

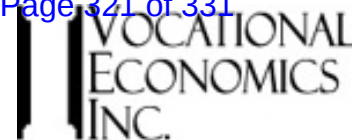
Case Name: Haysbert, Joann Wright

CONSULTANT: Enrique Vega

OFFICE: Woodland Hills

If the opposition has retained Vocational Economics before this contract is executed, this contract is null and void.

Prices subject to change without notice.



Informed Consent Form

Dear Attorney Nazareth Haysbert:

You have retained me to evaluate Joann Wright Haysbert's ability to work and earn money

- In the course of my work I will use information acquired during the interview with Joann Wright Haysbert or parent or legal guardian along with a review of additional records, which may include but are not limited to records pertaining to Joann Wright Haysbert's medical, legal, social, employment, educational and financial status.
- Joann Wright Haysbert may be asked to complete a test(s) of basic skills and/or a survey of career interests.
- I may develop a written or oral report regarding my objective, independent opinion of Joann Wright Haysbert's ability to work and earn money based on our interview, the additional records reviewed, and results of testing, if any testing is completed.
- Joann Wright Haysbert or parent or legal guardian should be aware that I may discuss my professional opinions and our conversation during testimony, without attorney-client or client-counselor privilege.
- Joann Wright Haysbert or parent or legal guardian may not agree with my opinions.
- I have been hired to evaluate and provide an opinion only.
- I have not been asked to provide vocational or any other counseling services.
- The normal confidentiality of a client-counselor relationship does not apply in this situation.

Sincerely,

Enrique Vega, Vocational/Vocational-Economic Analyst
Vocational Economics, Inc.

By signing this form, I confirm that I understand the information contained within this document.

Signature of Legal Representative

Date

Printed Name of Legal Representative

Please provide a copy of this signed form to Joann Wright Haysbert or parent or legal guardian. This disclosure form will be discussed with Joann Wright Haysbert or parent or legal guardian during our interview. Whenever possible, we ask that the evaluatee or parent or legal guardian sign a separate informed consent form.

Testimony Report: Enrique Vega

1/1/2017 through 1/19/2021

<i>Date</i>	<i>Case Name</i>	<i>Testimony Type</i>	<i>Court</i>
1/12/21	Tyler D. Reesor vs. Alexander Ernesto Castro, et al. [30-2018-01018312]	Deposition	Orange County Superior Court (CA)
1/11/21	Peggy Downing v. Shoreside Petroleum, Inc., and Russell Mills	Court	Alaska Superior Court - Third Judicial District (AK)
1/8/21	Peggy Downing v. Shoreside Petroleum, Inc., and Russell Mills	Court	Alaska Superior Court - Third Judicial District (AK)
1/8/21	Oliver Campbell, a minor vs. Kaiser Foundation Hospitals, et al. [15323]	Deposition	OIA (CA)
12/18/20	Josh Borak vs. Christopher Ka-Shing Lam, et al [19STCV25065]	Deposition	Los Angeles Superior Court - Central District (CA)
12/11/20	Scotty MacDowall v. House of Blues, et al. [BC267280]	Deposition	Los Angeles County Superior Court (CA)
12/1/20	Michael Gogue vs. James River Insurance Company	Arbitration	In the Matter of Arbitration ()
11/30/20	Reyna A. Ruiz v. Walmart, Inc., et al. [2:20-cv-01129-RAO]	Deposition	United States District Court, Central District (CA)
8/26/20	Antonio Plazola vs. Darling Ingredients, Inc., et al. [37-2019-00020080-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
8/5/20	Mateo Pascual vs. James River Insurance Company [Pre-Litigation]	Deposition	Uninsured Motorist Claim ()
7/27/20	Jon T. Romatzke, et al. v. Marriott International, Inc., et al. [2018 CV 30146]	Deposition	La Plata County District Court, Division 2 (CO)
7/16/20	Victoria Bedsole vs. Jump Around Now, et al. [A257443-48]	Deposition	In Re The Arbitration of ()
5/19/20	Alzahir Born vs. Payne Pest Management, Inc., et al. [BC694123]	Deposition	Los Angeles County Superior Court (CA)
5/11/20	Kimberly Sage Matthews vs. Isaiah Aaron Charles Holly, et al. [BC706417]	Deposition	Los Angeles County Superior Court (CA)
5/7/20	Alejandra Meza, et al vs. Efren Del Toro, et al. [BC669657]	Deposition	Los Angeles County Superior Court (CA)
5/6/20	Benjamin Wooley, et al. vs. Banner-University Medical Center South Campus, LLC, et al. [C20190907]	Deposition	Pima County Superior Court (AZ)
4/10/20	Caleb Williams, a minor vs. 7450 Augusta, LP, et al. [2016-CA-000450-O]		Orange County Circuit Court (FL)
4/10/20	Caleb Williams, a minor vs. 7450 Augusta LP, et al. [2016-CA-000450-O]	Deposition	Orange County Circuit Court (FL)
4/10/20	Caleb Williams, a minor vs. 7450 Augusta, LP, et al. [2016-CA-000450-O]	Deposition	Orange County Circuit Court (FL)
3/11/20	Jasmine Marie Acosta vs. Dann Frank Sarnoski, et al. [BC712172]	Deposition	Los Angeles County Superior Court (CA)
3/10/20	Bennie Ray Womack v. Marie Darlene Martin, et al. [37-2018-00048086-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
3/3/20	George Mokia vs. Stanley Haberman, et al. [BC692833]	Deposition	Los Angeles County Superior Court (CA)

Date	Case Name	Testimony Type	Court
2/28/20	Belinda Stewart vs. Michelle Wake, et al. [BC707130]	Court	Los Angeles County Superior Court (CA)
2/27/20	Michelle Agundez v. Smokey Points Distributing Inc., et al. [BC710769]	Deposition	Los Angeles County Superior Court (CA)
2/21/20	Yvonne Ekizian vs. Roger Lawrence Novack, et al. [BC688531]	Deposition	Los Angeles County Superior Court (CA)
2/7/20	Guillermo C. Frayre v. Park Sycamore, L.P., et al. [BC683148]	Court	Los Angeles County Superior Court (CA)
2/3/20	Daniel Garza vs. ABS Global, Inc., et al. [17CECG01654]	Court	Fresno County Superior Court (CA)
1/31/20	B.M., a minor, et al., vs. Ashford TRS Sapphire VI, LLC, et al. [3:19-cv-08021-JJT]	Deposition	US. District Court (AZ)
1/31/20	Randy Blankenchip, et al., vs. Ashford TRS Sapphire VI, LLC, et al. [3:19-cv-08021-JJT]	Deposition	U.S. District Court (AZ)
1/31/20	Susan Blankenchip, et al., vs. Ashford TRS Sapphire VI, LLC, et al. [3:19-cv-08021-JJT]	Deposition	U.S. District Court (AZ)
1/28/20	Philip Jung vs. City of Los Angeles, et al. [BC717130]	Deposition	Los Angeles County Superior Court (CA)
1/22/20	Omar Flores, et al. vs. Oscar Soria, et al. [BC624238]	Court	Los Angeles County Superior Court (CA)
1/13/20	Corey Shrewsbury vs. Atkinson/Walsh, et al. [RIC1704913]	Court	Riverside County Superior Court (CA)
12/19/19	Tessa Schonder vs. Star Waggon, Inc., et al. [BC708398]	Court	Los Angeles County Superior Court (CA)
12/18/19	Maria Gomez vs. City of Cerritos, et al. [BC713182]	Deposition	Los Angeles County Superior Court (CA)
12/13/19	Lewis Garcia, et al. vs. Retail Property Trust, et al. [30-2018-00997869-CU-PO-CJC]	Deposition	Orange County Superior Court (CA)
12/6/19	Tannia Delapaz vs. Los Robles Hospital and Medical Center, et al. [56-2015-00467870 CU-MM-VTA]	Court	Ventura County Superior Court (CA)
12/5/19	Juan Carlos Mosquera vs. State of California Department of Transportation, et al. [BCV-16-102488 SPC]	Deposition	Kern County Superior Court (CA)
11/26/19	Ahmed Eldefrawy vs. CIM Group, L.P., et al. [30-2018-00986737-CU-PO-CJC]	Deposition	Orange County Superior Court (CA)
11/25/19	Belinda Stewart vs. Michelle Wake, et al. [BC707130]	Deposition	Los Angeles County Superior Court (CA)
11/21/19	Mitchell Hunter Oakes vs. Progressive Transportation Services, Inc., et al. [BC556759]	Court	Los Angeles County Superior Court (CA)
11/21/19	Kimberly Ramirez, et al. vs. Fisher Scientific Company, L.L.C., et al. [2:19-cv-05898-SVW-JC]	Deposition	United States District Court, Central District (CA)
11/21/19	Tessa Schonder vs. Star Waggon, Inc., et al. [BC708398]	Deposition	Los Angeles County Superior Court (CA)
11/12/19	Tigranuhi Aridjian v. Anahit Kirakosian, et al. [BC642680]	Deposition	Los Angeles County Superior Court (CA)
11/11/19	Paul Rentsch, et al. v. Eldridge Waters White III, et al. [30-2017-00951739]	Deposition	Orange County Superior Court (CA)
11/6/19	Maralee Lawson vs. Byron Brashers, et al. [BC635041]	Court	Los Angeles County Superior Court (CA)

Date	Case Name	Testimony Type	Court
11/5/19	Alonso Ocon, et al. v. City of Santa Clarita, et al. [BC677779]	Deposition	Los Angeles County Superior Court (CA)
11/5/19	James Collins, et al. vs. Alexander Ivan Barragan, et al. [56-2016-00484371]	Court	Ventura County Superior Court (CA)
11/4/19	Nicholas Stauffer vs. Catholic Health Initiatives Colorado, et al. [2019 CV 30678]	Deposition	Jefferson County District Court (CO)
10/26/19	Tami Mayers vs. K.T.L. Business Insurance Services, Inc., et al. [37-2018-00027247-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
10/24/19	Phyllis Paxton vs. Sterling Motors, LTD, et al. [30-2017-00919944-CU-NP-CJC]	Court	Orange County Superior Court (CA)
10/22/19	Armando Rodriguez vs. Cristal Materials, Inc., et al. [BC675953]	Deposition	Los Angeles County Superior Court (CA)
10/18/19	Omar David Flores, et al. vs. Oscar Soria, et al. [BC624238]	Deposition	Los Angeles County Superior Court (CA)
10/17/19	Eighdyn Speights, a minor, et al. v. Redwood Highland Point, LLC, et al. [2018CV33571]	Deposition	Denver County District Court (CO)
10/17/19	Traci Willburn, et al. v. Redwood Highland Point, LLC [2018CV33571]	Deposition	Denver County District Court (CO)
10/17/19	Taylor Speights, et al. v. Redwood Highland Point, LLC, et al. [2018CV33571]	Deposition	Denver County District Court (CO)
10/14/19	John Philipp vs. Michael O'Brien, et al. [SCV261722]	Deposition	Sonoma County Superior Court (CA)
10/2/19	Giovanny Guevara vs. Tobinworld, et al. [BC649824]	Deposition	Los Angeles County Superior Court (CA)
9/19/19	Kadeja Burgess Hodge vs. Linda Jean Franks, et al. [CIVDS 1614512]	Deposition	San Bernardino County Superior Court (CA)
9/16/19	Jaime Davis vs. West Medical Center, Inc., and Maged Mikkail, M.D. [Arbitration]	Arbitration	Judicate West (CA)
9/13/19	Saul Maldonado Martinez v. Allen Yuavlin Cui, et al. [56-2018-00513898-CU-PA-VTA]	Deposition	Ventura County Superior Court (CA)
9/12/19	Carrie Tivador vs. Equinox Holdings, Inc. [BC641396]	Deposition	Los Angeles County Superior Court (CA)
9/9/19	Kody Rankin, a minor vs. Long Beach Unified School District [BC615886]	Court	Los Angeles County Superior Court (CA)
9/4/19	Jamie Davis v. West Medical Center, Inc., et al. [BS167402]	Deposition	Los Angeles County Superior Court (CA)
8/27/19	Cynthia Fortier vs. Eric Rodriguez, et al. [CIVDS1803705]	Deposition	San Bernardino County Superior Court (CA)
8/9/19	Jorge Guzman, Jr., v. Hector Chavez, et al. [BC562564]	Deposition	Los Angeles County Superior Court (CA)
8/8/19	Paul Anthony vs. Dean Lasso, et al. [30-2017-00931296-CU-PA-CJC]	Court	Orange County Superior Court (CA)
8/7/19	Maralee Lawson vs. Byron Brashears, et al. [BC635041]	Deposition	Los Angeles County Superior Court (CA)
7/23/19	Robert Stillman, et al. v. Flexivan Leasing, Inc., et al. [CIVDS1717607]	Deposition	San Bernardino County Superior Court (CA)
7/16/19	Bradley John Griffiths vs. QUI DUC VO, et al. [30-2015-00819457-CU-PA-CJC]	Deposition	Orange County Superior Court (CA)

Date	Case Name	Testimony Type	Court
7/13/19	Matthew Doughty vs. County of Sacramento, et al. [34-2017-00207515]	Deposition	Sacramento County Superior Court (CA)
7/11/19	Paul Anthony vs. Dean Lasso, et al. [30-2017-00931296-CU-PA-CJC]	Deposition	Orange County Superior Court (CA)
7/10/19	Jessica Fonseca, a minor, et al. v. Bakersfield City School District, et al. [BCV-16-101034 SPC]	Deposition	Kern County Superior Court, Metropolitan Division (CA)
7/8/19	Daniel Garza vs. ABS Global, Inc., et al. [17CECG01654]	Deposition	Fresno County Superior Court (CA)
7/1/19	Humberto Delgado-Martinez vs. Luis Angel Alonso, et al. [BC684853]	Deposition	Los Angeles County Superior Court (CA)
6/20/19	Estate of Martin Valdez-Burciaga, et al. vs. Erike Hightower, et al. [A-16-734774-C]	Deposition	Clark County District Court (NV)
6/19/19	A.L.G., a minor vs. Thacker Enterprises, Inc., et al. [CV-2017-4332-PI]	Deposition	Bannock County District Court (ID)
6/17/19	Xochitl Garcia; Maria Reyes Moreno vs. Adam Chrstopher Rowe, et al. [CIVDS1710792]	Deposition	San Bernardino County Superior Court (CA)
6/7/19	Hafsa Abdi, et al. v. Hyundai Motor Company, et al. [CV2017-014649]	Deposition	Maricopa County Superior Court (AZ)
6/4/19	Phyllis Paxton vs. Sterling Motors, LTD dba Sterling BMW, et al. [30-2017-00919944-CU-NP-CJC]	Deposition	Orange County Superior Court (CA)
6/3/19	Jaylah Arana, by and through her Guardian ad litem, Vanessa Perez vs. Evenflo Company, Inc., et al [BC635440]	Deposition	Los Angeles County Superior Court (CA)
5/21/19	Kody Rankin, a minor vs. Long Beach Unified School District, et al. [BC 615886]	Deposition	Los Angeles County Superior Court (CA)
5/17/19	Hongmai Truong vs. John Muir Medical Center, et al. [C16-01956]	Deposition	Contra Costa County Superior Court (CA)
5/15/19	Mary Depriest vs. Four Walls, LLC, et al. [BC678823]	Deposition	Los Angeles County Superior Court (CA)
5/8/19	Juan Angulo vs. Kenneth O'Hearn, et al. [17CV307133]	Court	Santa Clara County Superior Court (CA)
4/30/19	Jacqueline Leigh Gallagher vs. Southland Transit, Inc., et al. [BC653123]	Deposition	Los Angeles County Superior Court (CA)
4/23/19	Celeste Galvez vs. Robert Roland Firchow, et al. [BC607278]	Court	Los Angeles County Superior Court (CA)
4/16/19	Jesse Nicolas Gonzalez v. Juan Salome Martinez, et al. [BC666607]	Deposition	Los Angeles County Superior Court (CA)
4/10/19	Michael DiSenso, et al. vs. City of San Diego, et al. [37-2016-00042403-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
4/8/19	Robert Sierra Mandujano vs. Stephen Patrick Johnston, et al. [37-2017-00042932-CU-PA-CTL]	Court	San Diego County Superior Court (CA)
4/3/19	Michael Samuel Orrin, Jr., vs. Ananth Sundaralingam, et al. [BC609414]	Deposition	Los Angeles county Superior Court (CA)
3/19/19	Robert Sierra Mandujano vs. Stephen Patrick Johnston, et al [37-2017-00042932-CU-PA-CTL]	Deposition	San Diego Superior Court (CA)
3/15/19	Gabriel Morales vs. Colwell Realty, et al. [37-2017-00035941-CU-PO-CTL]	Deposition	San Diego County Superior Court (CA)
3/11/19	Angela Mary Zartuche vs. Jack David Aquino, et al. [BC659317]	Deposition	Los Angeles County Superior Court (CA)

<i>Date</i>	<i>Case Name</i>	<i>Testimony Type</i>	<i>Court</i>
3/6/19	Delapaz v. Nelson [56-2015-00467870-CU-MM-VTA]	Deposition	Ventura County Superior Court (CA)
3/4/19	Sharon Belvin vs. Kaiser Foundation Hospitals; et al. [Arbitration No.: 15236]	Deposition	(CA)
2/27/19	Kenneth Nunez v. Thomas Orth; et al. [17CV01156]	Deposition	Santa Cruz County Superior Court (CA)
2/25/19	Carla Hultenius, et al. vs. Liang-Chin Lee, et al. [30-2018 00976538]	Deposition	Orange County Superior Court (CA)
2/15/19	Jennifer Trabucco, et al. vs. Ming Jin, et al. [30-2017-00920724]	Deposition	Orange County Superior Court (CA)
2/14/19	Diana Kasian, et al. vs. Blake Leibel, et al. [BC624321]	Court	Los Angeles County Superior Court (CA)
2/13/19	Oscar Edmundo Muniz, Jr. vs. Jeremy Lee Taylor, et al. [BC643665]	Deposition	Los Angeles Superior Court (CA)
2/12/19	Shannon Abbott vs. The Home Depot U.S.A., Inc., et al. [37-2017-00005804-CU-OA-NC]	Deposition	San Diego County Superior Court (CA)
2/7/19	Dr. Michael Richman vs. City of Los Angeles, et al. [BC595258]	Deposition	Los Angeles County Superior Court (CA)
2/4/19	Dane Dudley vs. Betty Bernard, et al. [56-2017-00504612-CU-PA-VTA]	Deposition	Ventura County Superior Court (CA)
1/25/19	Celeste Galvez vs. Robert Roland Firchow, et al. [BC607278]	Deposition	Los Angeles County Superior Court (CA)
1/18/19	Jazmine Johnson vs. Stacey Harris, et al. [CIVDS1721314]	Deposition	San Bernardino County Superior Court (CA)
1/16/19	Cesar Borjas; Ambar Au vs. Alan Ghaemie; et al. [BC603266]	Deposition	Los Angeles County Superior Court (CA)
1/7/19	Heidi Eichelbaum vs. Shawn Paul Cowgig, et al. [VC651216]	Deposition	Los Angeles County Superior Court (CA)
1/3/19	Tabatha Thaker vs. Joseph Caserma, et al. [BC623508]	Deposition	Los Angeles County Superior Court (CA)
12/26/18	Zenith Labtan v. Gustavo A. Valle, et al. [37-2017-00020552-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
12/19/18	Frederick Agee, et al. vs. Motor City Heating & Cooling, Inc., et al. [17-011185-NO]	Deposition	Wayne County Circuit Court (MI)
12/19/18	Tre'Vyon Greenlee, et al. vs. Motor City Heating & Cooling, Inc., et al. [17-011185-NO]	Deposition	Wayne County Circuit Court (MI)
12/19/18	Tammy Greenlee, et al. vs. Motor City Heating & Cooling, et al. [17-011185-NO]	Deposition	Wayne County Circuit Court (MI)
12/19/18	Tamaria Arnold, a minor vs. Motor City Heating & Cooling, Inc., et al. [17-011185-NO]	Deposition	Wayne County Circuit Court (MI)
12/18/18	Juan Angulo vs. Kenneth O'Hearn, et al. [17CV307133]	Deposition	Santa Clara County Superior Court (CA)
12/17/18	Jame Collins, et al. vs. Alexander Ivan Barragan, et al. [56-2016-00484371]	Deposition	Ventura County Superior Court (CA)
12/17/18	Alberta Mora-Duran vs. Donna Mary Lofgren, et al. [PSC1701013]	Court	Riverside County Superior Court (CA)
12/6/18	Catherine White v. Zareh Koocherian, et al. [BC645210]	Deposition	Los Angeles County Superior Court (CA)

Date	Case Name	Testimony Type	Court
12/4/18	Claudia A. Jones vs. Keith V. Rundle, et al. [30-2017-00942910-CU-PA-CJC]	Deposition	Orange County Superior Court (CA)
11/28/18	Karen Cullinane vs. Citibank NA Banking, et al. [ADJ 9967562]	Court	Workers' Compensation Appeals Board (CA)
11/27/18	Kevin Wang, a minor, et al. vs. Sun Hospitality, Inc., et al. [BC680195]	Deposition	Los Angeles County Superior Court (CA)
11/20/18	Kevin Osborne vs. KB International, LLC, et al. [37-2017-00029293-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
11/12/18	Ronald Mitchell Jr. vs. Brittani Rochelle Niccole, et al. [30-2017-00907870]	Deposition	Orange County Superior Court (CA)
11/8/18	Rick Lee Verburg vs. T.A.S. Promanage, et al. [56-2014-00461537-CU-OR-VTA]	Court	Ventura County Superior Court (CA)
11/6/18	Dylan Christensen, et al. Tradecor PCH ANZA, LLC, et. Al [BC614820]	Court	Los Angeles County Superior Court (CA)
10/30/18	Ruby Rodriguez, a minor, vs. Joseph Alexandre, et al. [37-2017-00028300-CU-PA-NC]	Court	San Diego County - North County Superior Court (CA)
10/18/18	Michael Villano vs. City of Pasadena, et al. [BC654328]	Court	Los Angeles County Superior Court (CA)
10/15/18	Michael Villano vs. City of Pasadena, et al. [BC654328]	Deposition	Los Angeles County Superior Court (CA)
10/9/18	Johana Martinez vs. Elizabeth L. Enderton, D.O., et al. [1:16-CV-01556-LJO-SKO]	Deposition	U.S. District Court, Eastern District (CA)
10/8/18	Alberta Mora-Duran vs. Donna Mary Lofgren, et al. [PSC1701013]	Deposition	Riverside County Superior Court (CA)
10/5/18	Samari Doby vs. Home Depot Usa, Inc., et al. [BC549749]	Deposition	Los Angeles County Superior Court (CA)
9/27/18	Frederick Agee, et al. vs. Motor City Heating & Cooling, Inc., et al. [17-011185-NO]	Deposition	Wayne County Circuit Court (MI)
9/26/18	Michelle Mack vs. James W. Valentine, et al. [30-2015-00788690]	Court	Orange County Superior Court (CA)
9/17/18	Catherine White v. Zareh Koocherian, et al. [BC645210]	Deposition	Los Angeles County Superior Court (CA)
9/12/18	Elham Azimy aka Ellie Azimy vs. Restaurant Tea Service, Inc., et al. [30-2016-00881761-CU-PA-CJC]	Court	Orange County Superior Court (CA)
9/10/18	Jose Excobar vs. Alta Interiors, Inc., et al. [BC583610]	Deposition	Los Angeles County Superior Court (CA)
8/28/18	Linda Vanessa Carrillo, et al. vs. Wal-Mart Stores, Inc., et al. [CIVDS1605889]	Deposition	San Bernardino County Superior Court (CA)
8/27/18	Thomas Joseph Soulliere vs. Suzuki Motor of America, Inc., et al. [30-2015-00790644-CU-PL-CJC]	Court	Orange County Superior Court (CA)
8/13/18	Elham Azimy aka Ellie Azimy vs. Restaurant Tea Service, Inc. [30-2016-00881761-Cu-PA-CJC]	Deposition	Orange County Superior Court (CA)
8/3/18	Francisco D. Hernandez Manzanero vs. Estate of Earl Mohler, Deceased [37-2017-00018319-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
7/30/18	Kimberlin Garr vs. Mixology Management LP, et al. [BC635179]	Court	Los Angeles County Superior Court (CA)
7/17/18	elijah Pomaika Simone vs. Bruce Graham Jameson, et al. [30-2016-00832256]	Court	Orange County Superior Court (CA)

Date	Case Name	Testimony Type	Court
7/14/18	Thomas Joseph Soulliere v. Suzuki Motor of America, Inc., et al. [30-2015-00790644-CU-PL-CJC]	Deposition	Orange County Superior Court (CA)
7/2/18	Kimberlin Garr v. Mixology Management LP, et al. [BC635179]	Deposition	Los Angeles County Superior Court (CA)
6/14/18	Rick Lee Verburg vs. T.A.S. Promanage, et al. [56-2014-00461537-CU-OR-VTA]	Deposition	Ventura County Superior Court (CA)
6/7/18	Gabrielle DeFontanes vs. Anthony Ramirez Medina, et al. [BC639729]	Deposition	Los Angeles County Superior Court (CA)
5/1/18	Todd Nuber vs. Jimmy Esebag, et al. [BC636272]	Deposition	Los Angeles County Superior Court (CA)
4/10/18	John Yoder vs. Jonathon Williams, a minor, et al. [S-1500-CV-282058 TSC]	Deposition	Kern County Superior Court (CA)
4/9/18	Veronica Godinez vs. La Salsa Chilena, Inc., et al. [37-2016-00016517-CU-PA-CTL]	Court	San Diego County Superior Court (CA)
4/6/18	Veronica Godinez vs. La Salsa Chilena, Inc., et al. [37-2016-00016517-CU-PA-CTL]	Court	San Diego County Superior Court (CA)
3/12/18	Nicole E. Worrell, et al. vs. Daniel J. Gigerand, et al. [30-2016-00871861]	Deposition	Orange County Superior Court (CA)
3/8/18	Marco Antonio Rincon Mejia, et al. vs. Simon Property Group, Inc., et al. [CIVRS1401138]	Deposition	San Bernardino County Superior Court (CA)
3/8/18	Maria Flores De Rincon, et al. vs. Simon Property Group, Inc., et al. [CIVRS1401138]	Deposition	San Bernardino County Superior Court (CA)
3/5/18	Grainne M. Callan vs. Christina P. Long, et al. [115CV288632]	Deposition	Santa Clara County Superior Court (CA)
3/2/18	Victor Marquez vs. Oscar Blanco Ortiz, et al. [BC614288]	Court	Los Angeles County Superior Court (CA)
2/28/18	Victor Marquez vs. Oscar Blanco Ortiz, et al. [BC614288]	Court	Los Angeles County Superior Court (CA)
2/13/18	David Haines, et al. v. Officemax Contract, Inc., et al. [BC616366]	Deposition	Los Angeles County Superior Court (CA)
2/9/18	Francisco Pablo Davis vs. Kenneth Lyle Dixon, et al. [BC598234]	Deposition	Los Angeles County Superior Court (CA)
1/30/18	Ashley Elizabeth Picco, deceased, et al. v. Loma Linda Obstetrics & Gynecology, et al. [CIVDS1601535]	Court	San Bernardino Superior Court (CA)
1/22/18	Patti Kutschko, et al. vs. Selah Imports, Inc., et al. [BC 616972]	Deposition	Los Angeles County Superior Court (CA)
1/18/18	Dana Tuttle, deceased, et al. v. The Vail Corporation, et al. [30-2015-00813230-CU-PO-CJC]	Court	Orange County Superior Court (CA)
1/17/18	Mark Boll vs. Jiansong Tong, et al. [37-2017-00006886 CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
1/16/18	Michael Iorio, et al. vs. Edward Cardin, et al. [In Re Arbitration]	Court	()
1/16/18	Kyoung Lee vs. Richard Tan, et al. [BC 582 406]	Court	Los Angeles County Superior Court (CA)
1/12/18	Kyoung Lee vs. Richard Tan, et al. [BC 582 406]	Court	Los Angeles County Superior Court (CA)
1/11/18	Nataliya Ratosh vs. Alfred Calderon, et al. [37-2016-00039261-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)

Date	Case Name	Testimony Type	Court
12/28/17	Michael Iorio, et al. v. Edward Cardin, et al. [In Re Arbitration]	Deposition	(CA)
12/27/17	Dylan Christensen, et al. v. Tradecor PCH Anza LLC, et al. [BC614820]	Deposition	Los Angeles County Superior Court (CA)
12/21/17	Pamela Jean Pacific, et al. v. Martin Preciado, et al. [1609833]	Deposition	San Bernardino County Superior Court (CA)
12/20/17	Dania Nicole Montero, a minor v. Glendale Memorial Hospital & Health Center, et al. [BC561066]	Deposition	Los Angeles County Superior Court (CA)
12/11/17	Karen Cullinane vs. RCEA, Inc., et al. [30-2015-00796929]	Deposition	Orange County Superior Court (CA)
12/8/17	Victor Marquez vs. Oscar Blanco Ortiz, et al. [BC614288]	Deposition	Los Angeles County Superior Court (CA)
11/21/17	Blake Medina, et al., vs. Ammo Load, Inc., et al. [30-2016-00839866-CU-PO-CJC]	Court	Orange County Superior Court (CA)
11/16/17	Veronica Godinez vs. La Salsa Chilena, Inc., et al. [37-2016-00016517-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
11/8/17	Blake Medina, et al. vs. Ammon Load, Inc., et al. [30-2016-00839866-CU-PO-CJC]	Deposition	Orange County Superior Court (CA)
10/20/17	Humberto Esteban Garcia, et al. vs. Rudolph & Sletten, et al. [30-2015-00786342-CU-PO-CJC]	Deposition	Orange County Superior Court (CA)
10/17/17	Hector Sosa vs. Menlo Trust Century Quality Management Inc., et al. [BC601125]	Deposition	Los Angeles County Superior Court (CA)
10/9/17	Jorge Puerto vs. Guaranty Chevrolet Motors, Inc., et al. [30-2015-00771813]	Deposition	Orange County Superior Court (CA)
10/6/17	Dana Tuttle, Deceased, et al., v. The Vail Corporation, et al. [30-2015-00813230-CU-PO-CJC]	Deposition	Orange County Superior Court (CA)
10/4/17	Ashley Elizabeth Picco, Deceased, et al., vs. Loma Linda Obstetrics & Gynecology, et al. [CIVDS1601535]	Deposition	San Bernardino County Superior Court (CA)
9/29/17	Jose Trinidad Flores vs. M & N Rug Enterprise LLC, et al. [BC561949]	Deposition	Los Angeles County Superior Court (CA)
9/28/17	Anand Kamdar vs. Lotus Transportation Group, et al. [30-2016-00867482-CU-PA-CJC]	Court	Orange County Superior Court (CA)
9/27/17	Jose Barraza and Georgina Barraza vs. Hof & Yates Rebar, Inc., et al. [BC539967]	Court	Los Angeles County Superior Court (CA)
9/22/17	Anand Kamdar v. Lotus Transportation Group, et al. [30-2016-00867482-CU-PA-CJC]	Deposition	Orange County Superior Court (CA)
9/18/17	Amanda McDonough vs. Carlos Campos, et al. [BC605346]	Deposition	Los Angeles County Superior Court (CA)
9/13/17	Jon Francis Peters vs. Pedrto Manon, et al. [BC585067]	Court	Los Angeles County Superior Court (CA)
9/8/17	Jose Barraza and Georgina Barraza vs. Hof & Yates Rebar, Inc., et al. [BC539967]	Deposition	Los Angeles County Superior Court (CA)
8/28/17	Jose Rubio v. Asiana Superior Coach, Inc., et al. [BC596567]	Deposition	Los Angeles County Superior Court (CA)
8/25/17	Richard Danker v. Old Republic Insurance [B423408844000401]	Arbitration	(CA)
8/25/17	Donald Barbosa vs. Global Paratransit, et al. [BC585104]	Court	Los Angeles County Superior Court (CA)

Date	Case Name	Testimony Type	Court
8/15/17	Rafael Vizcarra v. Evergreen Recycling, Inc., et al. [BC606705]	Deposition	Los Angeles County Superior Court (CA)
8/14/17	Jon Francis Peters, Pedrto Manon, et al. [BC585067]	Deposition	Los Angeles County Superior Court (CA)
8/8/17	Donald Barbosa vs. Global Paratransit, Inc., et al. [BC585104]	Deposition	Los Angeles County Superior Court (CA)
8/7/17	Kyoung Lee vs. Richard Tan, et al. [BC582406]	Deposition	Los Angeles County Superior Court (CA)
7/20/17	Megan E. Leise v. Jackson & Co. (USA) Inc., and Per Huffeldt [2016CV032197]	Court	Denver County District Court (CO)
7/12/17	Janet Kwak, et al., vs. Steven Bradley Harter, M.D., et al. [A-14-696506-C]	Court	Clark County District Court (NV)
7/10/17	Euardo Corona v. Christopher Jesus Leanos, et al. [BC597738]	Deposition	Los Angeles County Superior Court (CA)
6/22/17	Dionne Licudine v. Cedars Sinai Medical Center, et al. [BC 499 153]	Court	Los Angeles County Superior Court (CA)
6/16/17	Lina Zuniga v. Sandy Lo, et al. [RG15795347]	Deposition	Alameda County Superior Court (CA)
6/12/17	Simon Russell v. Werner Enterprises, Inc., et al. [4:14-CV-02474-TUC-RM (EJM)]	Deposition	U.S. District Court (AZ)
6/8/17	Maximo Torres vs. Evoqua Water Technologies LLC, et al. [BC591491]	Deposition	Los Angeles County Superior Court (CA)
6/7/17	Shakira Booth vs. Silvia Aguayo [37-2016-00019250-CU-PA-CTL]	Deposition	San Diego County Superior Court (CA)
6/6/17	Alfonso Serna, Jr. vs. Jorge Miguel Gonzalez Recendez, et al. [RIC1600289]	Deposition	Riverside County Superior Court (CA)
6/6/17	Richard Danker v. Old Republic Insurance [B423408844000401]	Arbitration	Underinsured Motorist Arbitration (CA)
5/26/17	Megan E. Leise v. Jackson & Co. (USA) Inc., and Per Huffeldt [2016CV032197]	Deposition	Denver County District Court (CO)
5/22/17	Dionne Licudine v. Cedars Sinai Medical Center, et al. [BC 499 153]	Deposition	Los Angeles Superior Court (CA)
5/15/17	Tara Duffy vs. Jose Perla, et al. [S-1500-CV-284518]	Deposition	Kern County Superior Court (CA)
5/12/17	Arturo Borroel vs. Grand American Tires, et al. [BC595328]	Deposition	Los Angeles Superior Court (CA)
5/9/17	Luis Gustavo Lugo vs. Hecto Reartes, et al. [01-16-0001-9187]	Deposition	San Bernardino County Superior Court (CA)
4/19/17	Chad Case vs. Maria Elena Carbajal, et al. [30-2015-00780344]	Court	Orange County Superior Court (CA)
4/18/17	Richard Samkow vs. Steven James Brass, et al [BC518139 c/w BC 551301]	Court	Los Angeles County Superior Court (CA)
4/17/17	Richard Samkow vs. Steven James Brass, et al. [BC518139 c/w BC551301]	Court	Los Angeles County Superior Court (CA)
3/22/17	Leah Marie Stewart, et al. vs. County of Orange, et al. [30-2015-00790779-CU-PA-CJC]	Court	Orange County Superior Court (CA)
3/22/17	David Lloyd Stewart, et al. vs. County of Orange, et al. [30-2015-00790779-CU-PA-CJC]	Court	Orange County Superior Court (CA)

<i>Date</i>	<i>Case Name</i>	<i>Testimony Type</i>	<i>Court</i>
3/10/17	Elijah Pomaika Simone vs. Bruce Graham Jameson, et al. [30-2016-00832256]	Deposition	Orange County Superior Court (CA)
2/22/17	Ricardo Pena vs. Traffix Devices, Inc., et al. [CIVDS1413261]	Deposition	San Bernardino County Superior Court (CA)
2/20/17	Janet Vafaie vs. Anita Lorber, et al. [BC503243]	Deposition	Los Angeles County Superior Court (CA)
1/31/17	William Bryan vs. Orange County Trasportation Authority, et al. [30-2014-00763385]	Deposition	Orange County Superior Court (CA)
1/23/17	Daniel A. Gaytan vs. Nyasha Frederick Hatendi, et al. [BC571283]	Deposition	Los Angeles County Superior Court (CA)
1/18/17	Gary Ingram v. California Coach Orange, Inc., et al. [30-2015-00827685-CU-PA-CJC]	Deposition	Orange County Superior Court (CA)
1/13/17	James C. Davis vs. Marshall E. Redding, M.D. [BC564992]	Court	Los Angeles County Superior Court (CA)
1/11/17	Rasneek Singh v. Orange Unified School District [30-2015-00783525-CU-PA-CJC]	Deposition	Orange County Superior Court (CA)